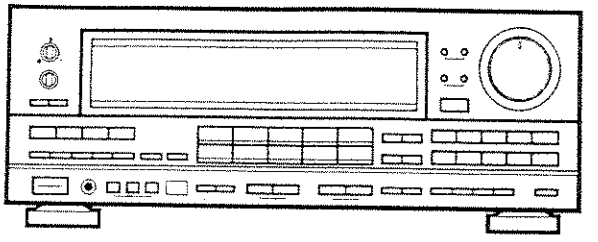
MASTER

Operating Instructions

AUDIO/VIDEO STEREO RECEIVER

VSX-7300S

The "S" at the end of the model number indicates that a programmable remote control unit is supplied. The panel itself says VSX-7300.



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

This unit is provided with a demonstration mode function; for details, see page 2.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE
[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISSE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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The future of sound and vision.

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.

HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION — The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.

VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

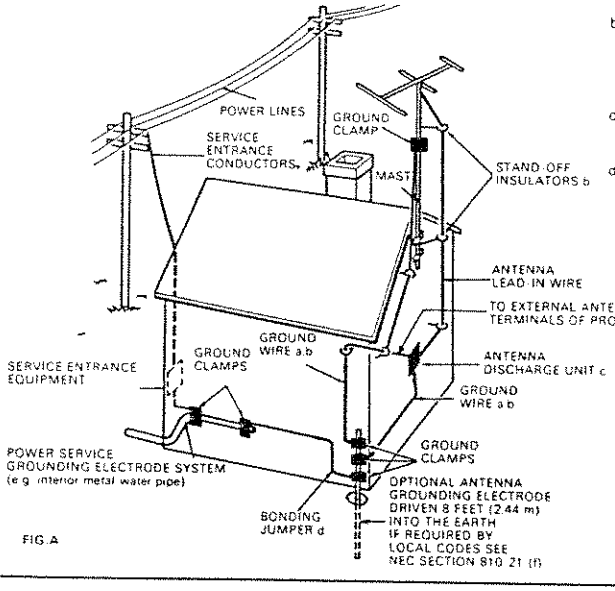

POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS
MAST
STAND-OFF INSULATORS b
ANTENNA LEAD-IN WIRE
TO EXTERNAL ANTENNA TERMINALS OF PRODUCT
GROUND WIRE a,b
GROUND CLAMPS
SERVICE ENTRANCE EQUIPMENT
ANTENNA DISCHARGE UNIT c
GROUND WIRE a,b
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES SEE NEC SECTION 810-21 (f)
BONDING JUMPER d

FIG.A

a) Use No. 10 AWG (5.3 mm^2) copper, No. 8 AWG (8.4 mm^2) aluminum, No. 17 AWG (1.0 mm^2) copperclad steel, bronze wire, or larger as ground wire.

b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.

c) Mount antenna discharge unit as closely as possible to where lead-in enters house.

d) Use jumper wire not smaller than No. 6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna-grounding electrode is used.
See NEC Section 810-21 (j).

About the Demonstration Mode

- The demonstration mode is activated by turning on the power switch while holding down the FM MODE switch (from power standby condition). The demonstration will appear on the display.
- Press any other switch to cancel the demonstration.

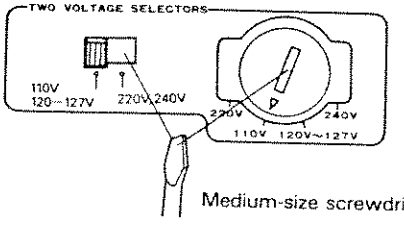
BEFORE OPERATING, ADJUST THE POSITION OF THESE SWITCHES

TWO VOLTAGE SELECTOR SWITCHES

Only multi-voltage models are provided with these switches. U.S., Canadian, European, U.K., and Australian models are not provided with these switches.

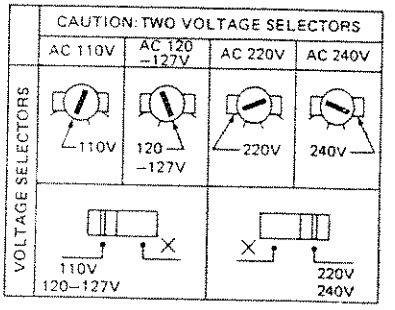
The line voltage selector switches are on the rear panel. Before your model is shipped from the factory,these switches are set to the power requirements of the destination. Check that they are set properly before plugging the power cord into the household wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switches as follows.

1. Use a medium-size screwdriver.
2. First, insert a screwdriver in the groove of the voltage selector at the right, and adjust so that the tip of the groove points to the voltage value of your area.
3. Next, insert a screwdriver in the groove of the voltage selector at the left and adjust until the voltage is the same as at the right.



Medium-size screwdriver

NOTE:
Both switches must be in the same switch setting. Other use, unit may be damaged.



CHANNEL STEP/FM DE EMPHASIS SWITCH

The unit has been factory preset to the channel allocation and de-emphasis value for the area in which it is to be sold.If these values are set incorrectly, the frequency display may stop at the wrong frequency, or sound may be distorted, resulting in an inability to reproduce reception signals at their proper sound quality. For this reason, be sure to confirm that the values are set correctly before first using the unit.

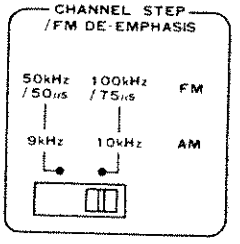
[100kHz/10kHz/75μs] position:

Set to this position for areas with an FM reception step of 100kHz,AM 10kHz, and de-emphasis 75μs.

[50kHz/9kHz/50μs] position:

Set to this position, for areas with an FM reception step of 50kHz, AM 9kHz, and de-emphasis 50μs.

NOTE:
When unsure about the channel allocation and de-emphasis values for your area, consult your dealer for correct information.



FEATURES

The VSX-7300S is an audio-video component combining the functions of receiver, wireless remote control, audio-video selector, surround processor and video enhancer. It will play a central role in your enjoyment of audio- video media.

• BUILT-IN DIGITAL DELAY DOLBY SURROUND CIRCUIT AND 4 POWER AMPLIFIER MODES.

Enjoy the presence and the expansive effect of surround playback. Three different surround effect and 3-step delay times are available.

• MOTOR DRIVEN LARGE VOLUME KNOB WITH LED INDICATOR

The large volume knob contributes to operational convenience and positive response. You can even operate it via remote control. When you change the volume setting using the remote, the knob turns by itself, making it easy to keep track of the current setting.

• ENHANCER, SPLIT-SCREEN FUNCTION

The built-in detail-type enhancer is beneficial when making copies of VCR tapes. Also, by using the split-scren function, you can simultaneously view the enhanced and original (non-enhanced) images.In this way you can select the optimum settings for enhancing the image.
This can be applied to both the monitor signal and the VCR1, 2 REC OUT signal, or to the VCR1 REC OUT signal alone.

• VIDEO SIGNAL SELECTOR (Simulcast function)

Allows free combination of various audio video sources during playback and over-dubbing, enabling you to produce your own original video program.

• TWO-WAY VCR COPYING AND MONITORING

VCR1↔VCR2: Copying of video cassette tapes can be performed in either direction.
VDP/CDV, TV→VCR1, VCR2: Allows simultaneous production of two copies from a single video source such as video disc or compact disc with video signal.

• VCR1 RECORDING SELECTOR FUNCTION

You can record on VCR1 from VDP/CDV or VCR2, regardless of other functions.

• ACOUSTIC MEMORY FUNCTION

Five types (A—E) of tone control settings can be preset.The settings for loudness and flat tone response functions can also be selected quickly.

• STATION CALL-LETTER DISPLAY FUNCTION

The call-letters of broadcast stations can be preset (up to four characters).
After presetting, the display can show the broadcasting frequency and the call letters depending on the preset letters. (for example WBAC, JAZZ, NEWS, etc.).

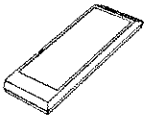
AV REMOTE CONTROL UNIT WITH LEARNING FUNCTIONS

With the attached remote control unit you can operate any Pioneer audio or video component bearing the mark. Using additional learning functions a whole AV surround system including a TV and VCR from other manufacturers can be controlled. (Some manufacturers' remote control systems, however, are not suitable for programming.)

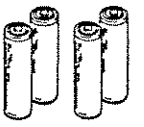
ACCESSORY ITEMS

FM T-type Antenna

AM Loop Antenna



Audio/Video programmable remote control unit



Alkaline dry cell battery x 4
(size "AAA" (LR03/AM-4))

SURROUND EFFECT

This unit has a built in surround processor for adding presence and an expansive effect to the sound.

- **STADIUM:**
  Select this position when watching sports programs such as baseball games, football games etc., for a stadium-like effect.
- **SIMULATED SURROUND:**
  Use this mode for monaural sources. You will obtain an expansive sound, with outstanding presence.
  Can also be used with stereo sources.
- **DOLBY SURROUND**
  Choose this setting for movies and music (especially Video Discs and video tapes bearing the DOLBY SURROUND or DOLBY STEREO mark) playback.
  Dolby Surround decodes the surround and center channel information in the source signal, providing a feeling of left-right and front-back movement to match the action on screen.

When using DOLBY SURROUND, a delay time setting of 20ms is commonly used. Use a different setting if you prefer.

Even if they do not bear the DOLBY SURROUND or DOLBY STEREO mark, some video recordings may be Dolby Surround encoded.

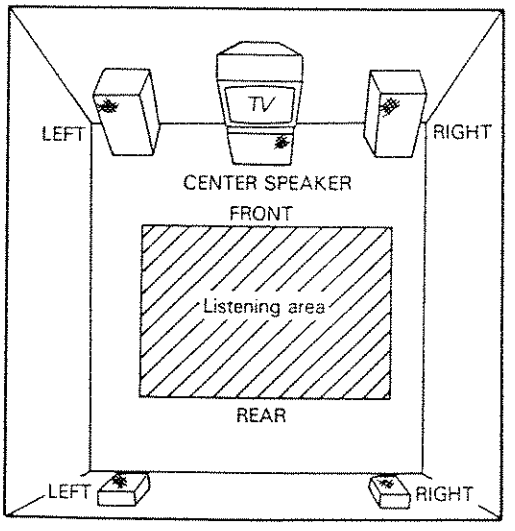
DOLBY SURROUND can be used with non DOLBY SURROUND encoded stereo sources. Adjust the volume of each speaker to obtain a suitable surround effect.

Choose the SIMULTATED SURROUND mode if the source sound signal is mono. Little or no sound will be heard from the surround speakers if the STADIUM or DOLBY SURROUND mode is selected.

SURROUND SPEAKER INSTALLATION EXAMPLE

To get the best effect out of the surround system, place the speakers as shown below.

Example of center speaker configuration



NOTE:

- *To avoid interference with the picture on a nearby TV set, use magnetically shielded speaker systems. This is particulary important for the center speaker since it is usually located closset to the TV.*
- *Position the left and right channel speakers at equal distances from the TV set.*
- *Position the center speaker above, below, or behind the TV set. Sound may not appear to coincide with the picture if you position it next to the TV set.*
- *Surround speakers are best positioned to set slightly above ear level.*

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Dolby Surround level adjustment procedure

1. Use SURROUND MODE switch to select DOLBY SURROUND.
2. Turn on front speakers and rear speakers.
3. Select a monaural source (such as AM radio).
4. Set balance and rear level to preset positions.
   - Press BALANCE L and R switches together.
   - Press REAR LEVEL + and − switches together.
5. Adjust MASTER VOLUME to a suitable listening level.
6. Turn off front speakers. (Leave rear speakers on.)
7. Adjust rear panel SURROUND BALANCE knob to the position that gives minimum volume from the rear speakers.
8. Turn on front speakers. (Leave rear speakers on.)
9. Use INPUT SELECTOR to select desired source.
10. Use BALANCE L and R switches to adjust left-to-right balance.
11. Use REAR LEVEL + and − switches to adjust front-to-rear volume balance.

If using the center channel, adjust the amp connected to the CENTER OUT jack so that the center speaker volume is nearly the same as the left-right speaker volume.

TWO WAY SOUND EFFECTS

VCR NOISE FILTER

When playing back a monaural VCR, there is a tendency for audible high-frequency hiss to be produced.
When playing back video tapes, if the audio channels contain noticeable high-frequency tape hiss, pressing this switch will improve the sound.

SIMULATED STEREO

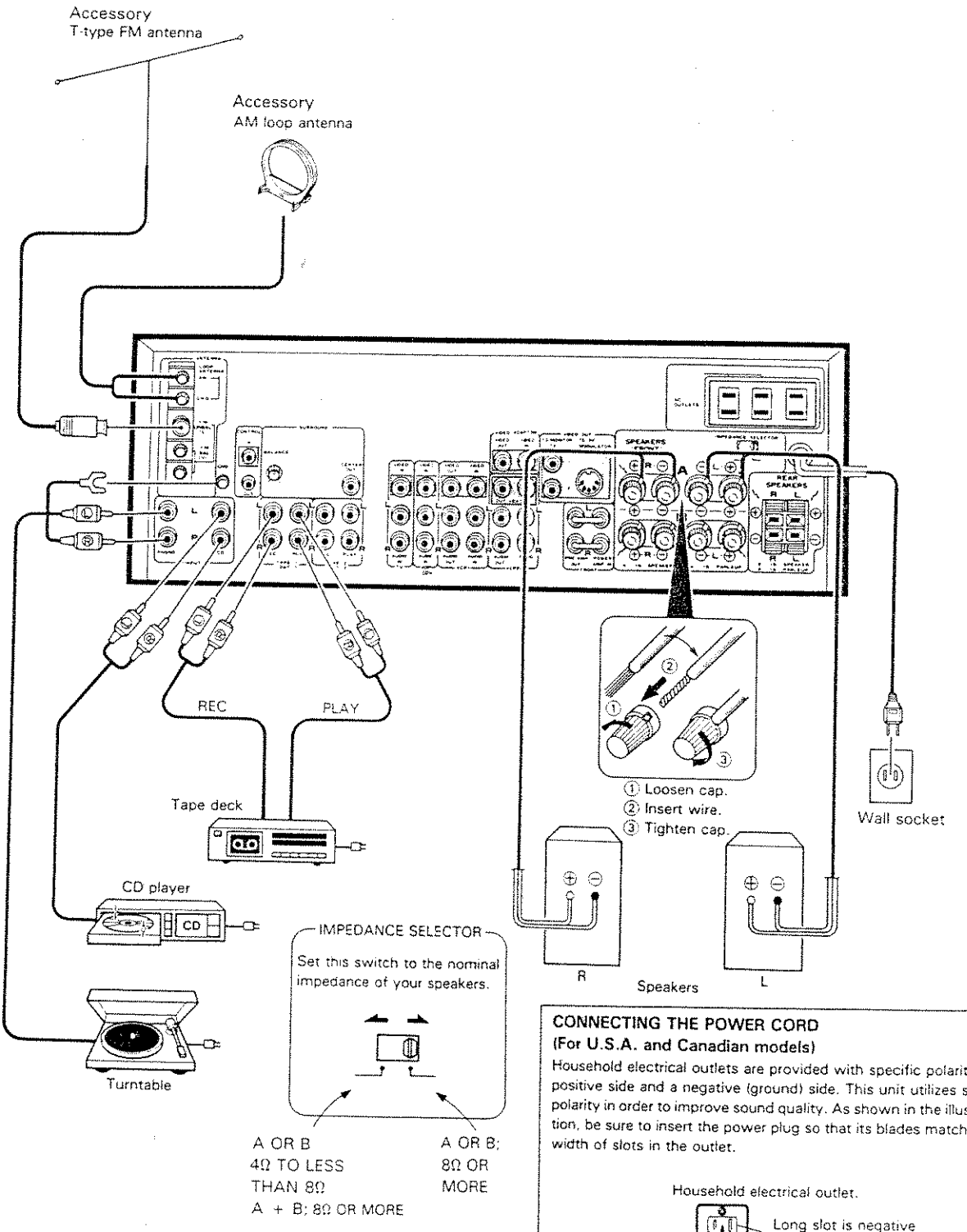
This function transforms monaural signals into simulated stereo sound. Use it when you wish to experience a sence of stereo presence when listening to AM broadcasts, a monaural VCR or other monaural signal sources.

NOTE:

The simulated stereo function can also be used with stereo sound sources, but it will result in an effect somewhat different from the normal stereo sound.

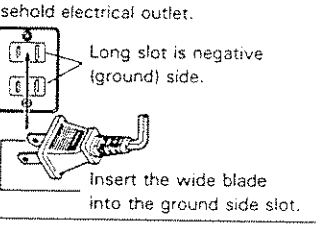
CONNECTION CHART

Audio Component Connections

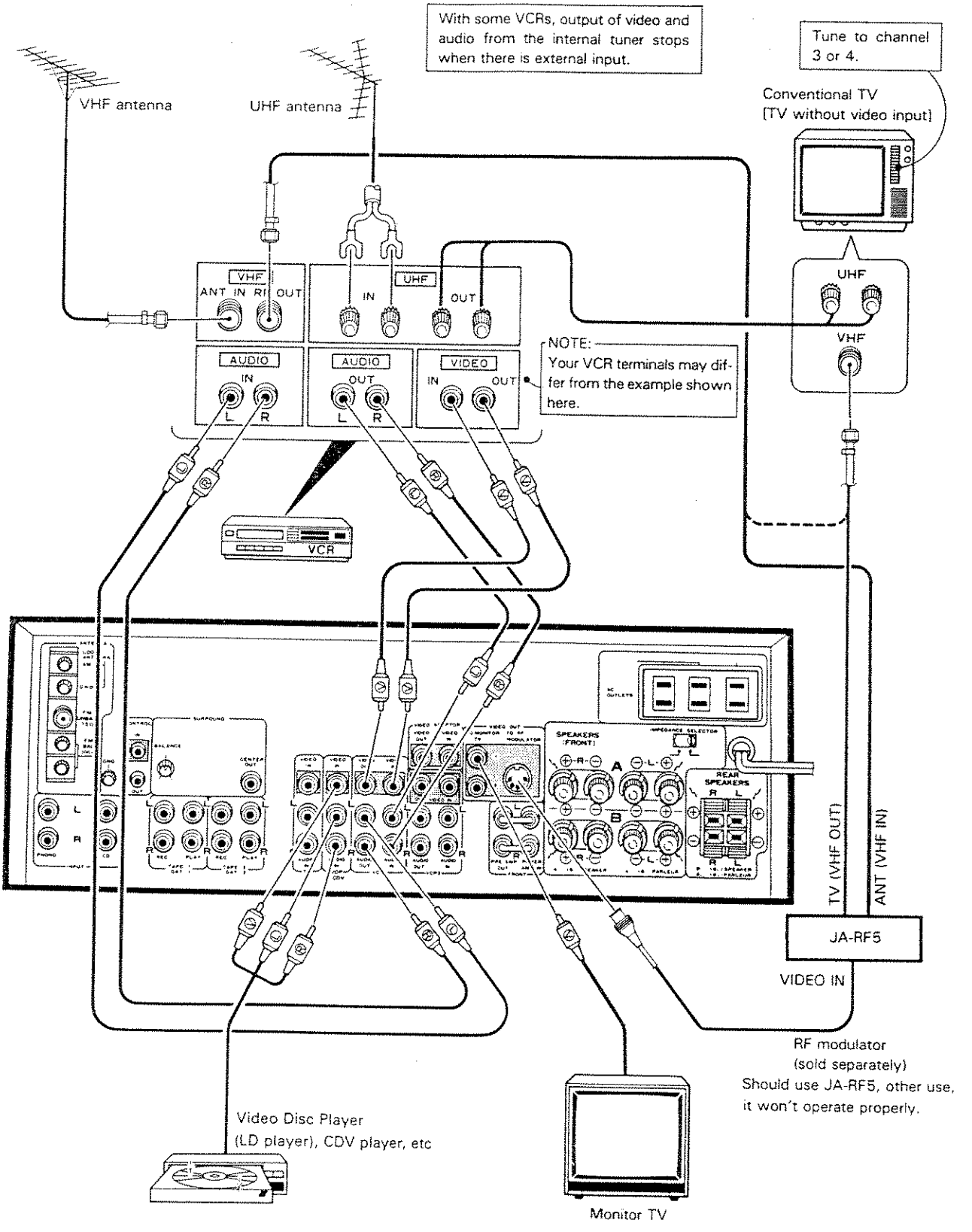


CONNECTING THE POWER CORD
(For U.S.A. and Canadian models)

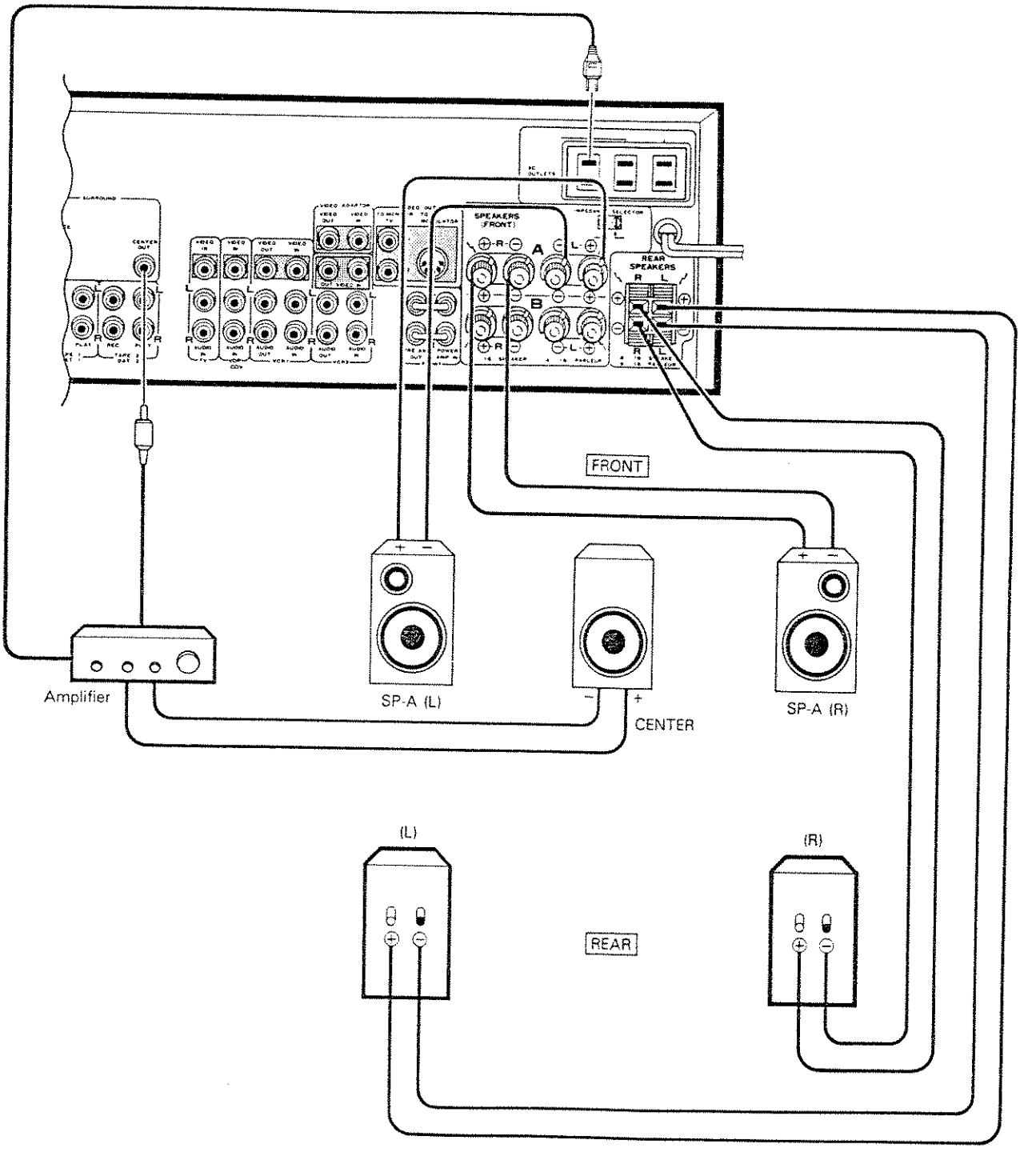
Household electrical outlets are provided with specific polarity, a positive side and a negative (ground) side. This unit utilizes such polarity in order to improve sound quality. As shown in the illustration, be sure to insert the power plug so that its blades match the width of slots in the outlet.



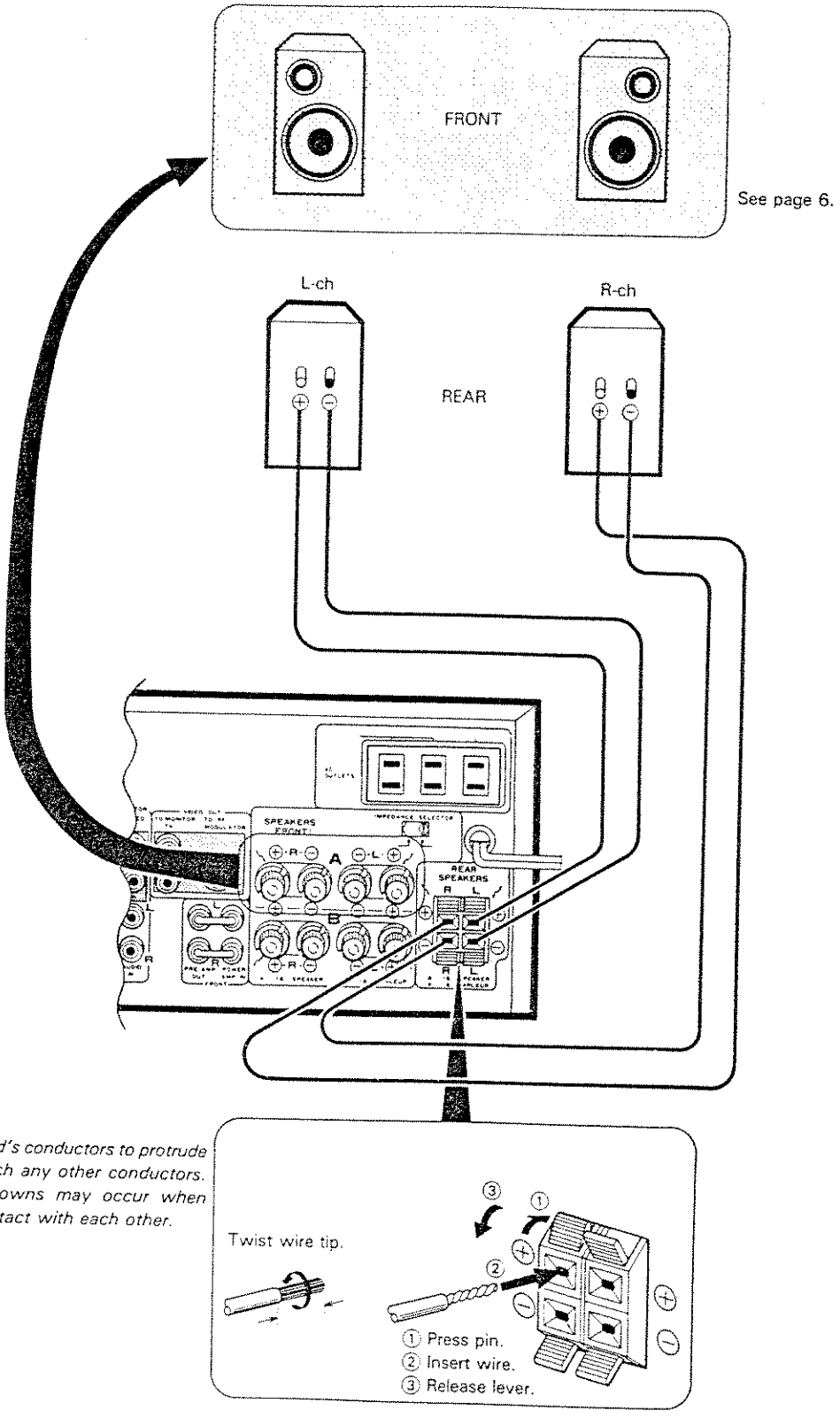
Video Component Connections



Surround Speakers Connections (Complete diagram)



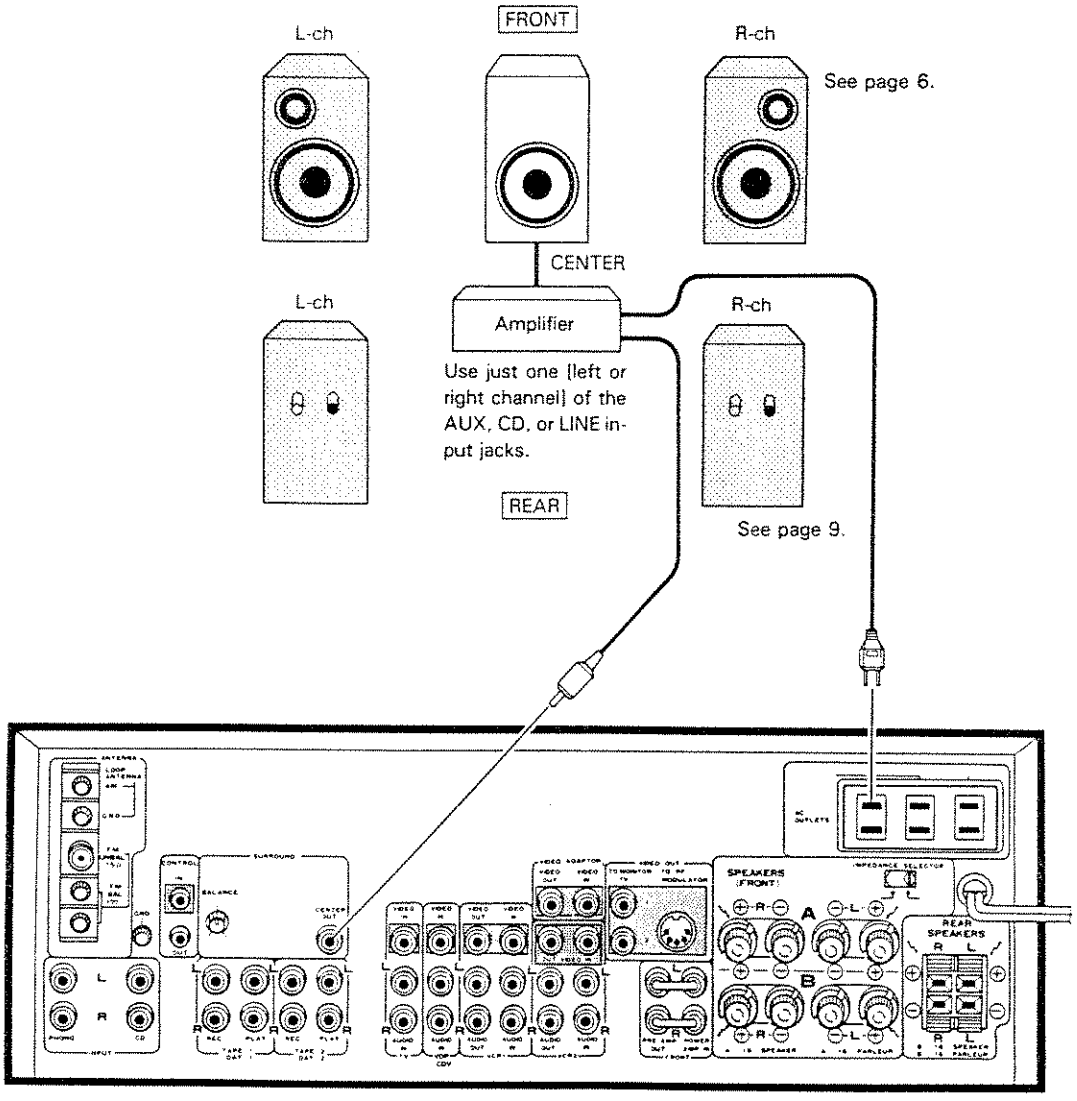
Surround Speakers Connections (Rear Speakers Connections)



See page 6.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

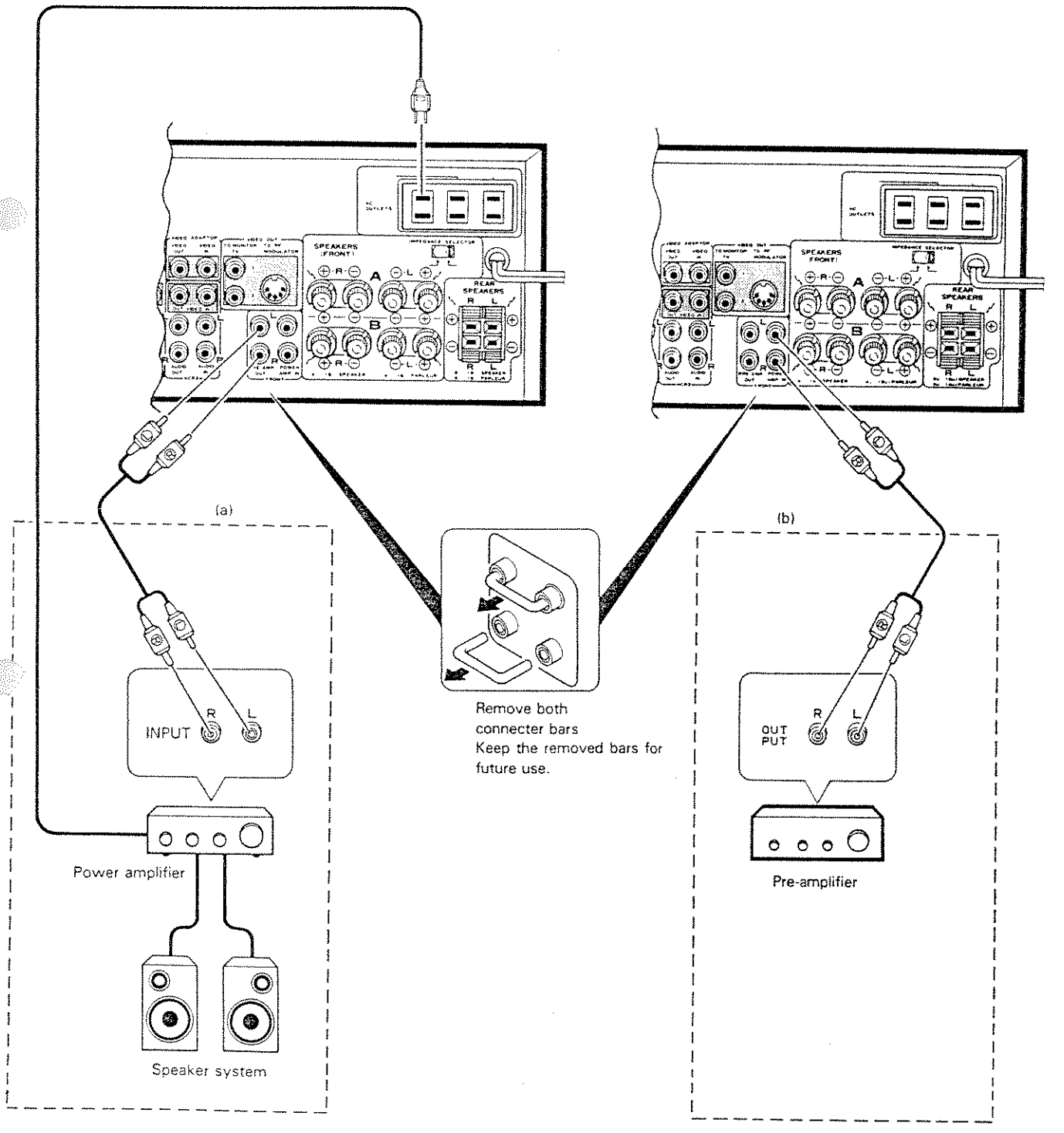
Surround Speakers Connections (Center Speaker Connection)



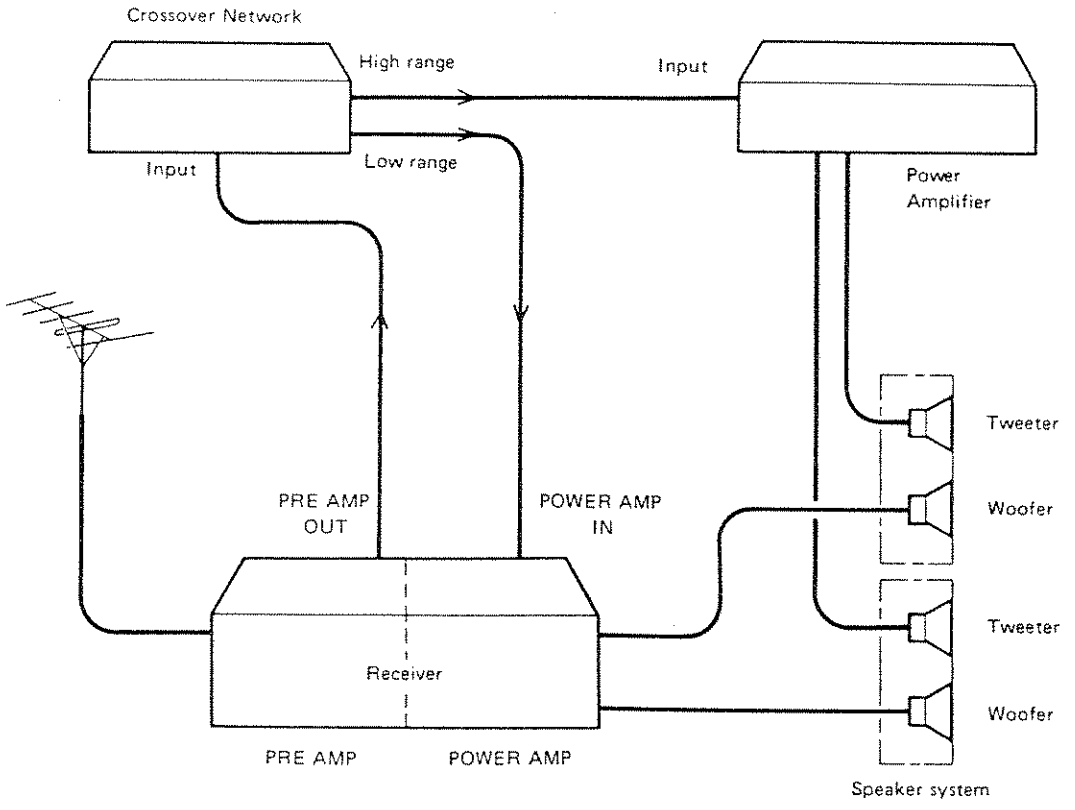
When used with another amplifier (power amplifier,pre-amplifier)

(a) Connections if using another power amp.
Using the tuner and surround functions, together with another power amp for the front speaker.

(b) Connections if using an external preamp.
Using the VSX-7300S as a power amp, together with an external preamp.

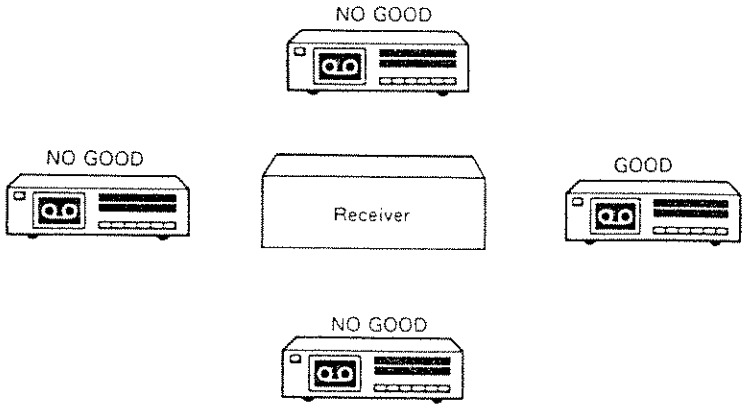


Application example — MULTI-AMPLIFIER SYSTEM

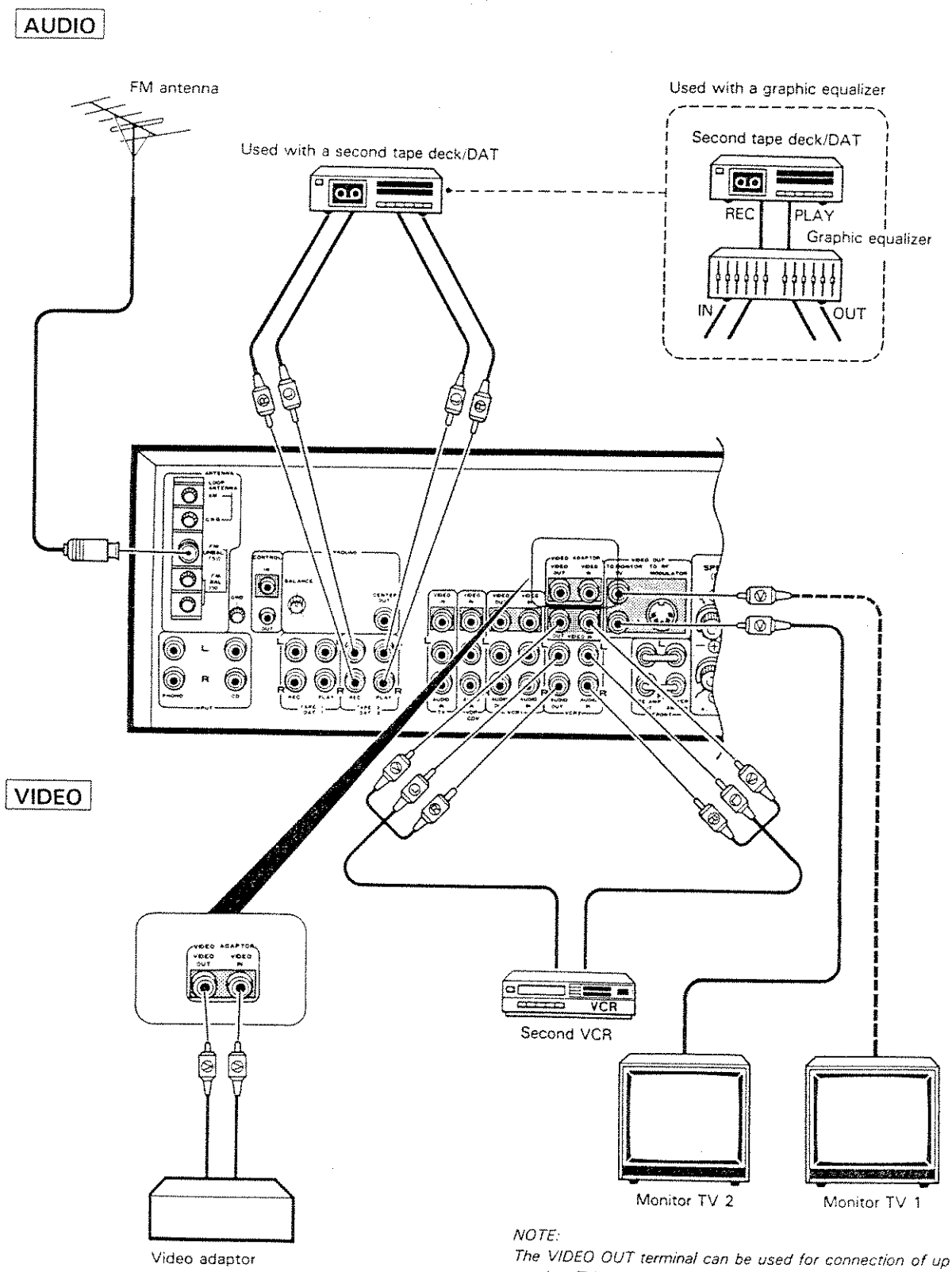


Precaution regarding installation position of cassette tape deck.

If the cassette tape deck is installed in the "NO GOOD" positions shown in the drawing below, hum may occur during playback.

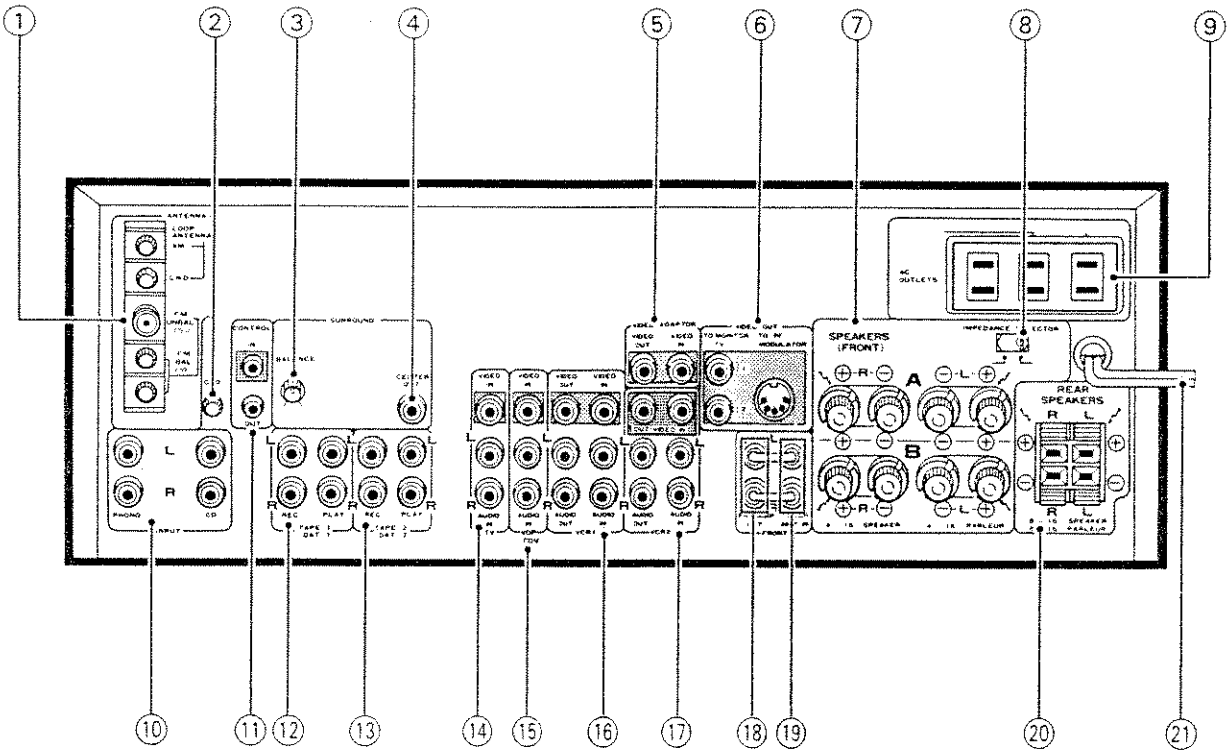


System Connecting Application



NOTE:
The VIDEO OUT terminal can be used for connection of up to two monitor TVs, or one monitor TV and one conventional TV.

REAR PANEL FACILITIES



① FM/AM ANTENNA terminals
Use these antenna terminals for reception of normal FM and AM broadcasts.
- For details regarding antenna connection,see the section "Hints for Better Reception" on page 40.

② GND terminal
Connect the turntable ground lead to this terminal.

③ SURROUND BALANCE control (DOLBY SURROUND)
Use to adjust the surround effect from the surround rear speakers. Normally leave in the center position. When inputting a monaural signal and front speakers are OFF position, adjust so that the surround rear output is minimum. (See page 5.)

④ SURROUND CENTER OUT jack
This is the Dolby surround center channel signal output jack. It can also be used as a 3D (single subwoofer) system MONO output.

⑤ VIDEO ADAPTOR jacks
Use to connect a video adaptor component such as a video enhancer or color corrector.

⑥ VIDEO OUT jacks
Use to connect a TV set for watching program materials from a VCR or VDP connected to this unit.

[TO MONITOR TV jacks]

Connect to monitor TV or to TV sets with video input terminals.

[TO RF MODULATOR jack]

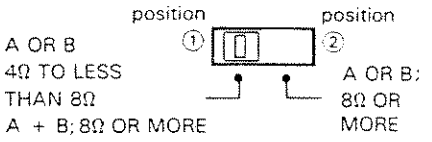
Use to connect a conventional TV set. When performing connections, the RF MODULATOR JA-RF5 (sold separately) is required. By connecting an RF modulator, video signal can be converted to VHF signal (U.S. channel 3 or 4), thus allowing this unit to be used to view the selected source on a conventional television set.

NOTE
- *A "conventional TV set" has an antenna input terminals only.*
- *Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.*

⑦ FRONT SPEAKERS terminals
A: Connect to a first set of speakers.
B: Connect to a second set of speakers.

Please refer to item 8. Front speakers impedance selector switch.

⑧ Front speakers impedance selector switch
Set this switch to match the impedance of your speakers.



- When using a pair of speakers:

Impedance of a speaker	Selector position
4Ω to less than 8Ω	①
8Ω or more	②

- When using two pairs of speakers:

Select ① as the selector switch position and use speakers having impedance of 8 ohms or more.

NOTE:
Turn off the receiver's power before changing the impedance selector switch setting.

⑨ AC OUTLETS
(U.S. and Canadian models)

SWITCHED TOTAL 300W MAX

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equippment should not exceed 300W.

UNSWITCHED 200W MAX

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 200W.

The equipment should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.

(Multi-voltage model)

SWITCHED TOTAL 100W MAX

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equippment should not exceed 100W.

UNSWITCHED 100W MAX

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100W.

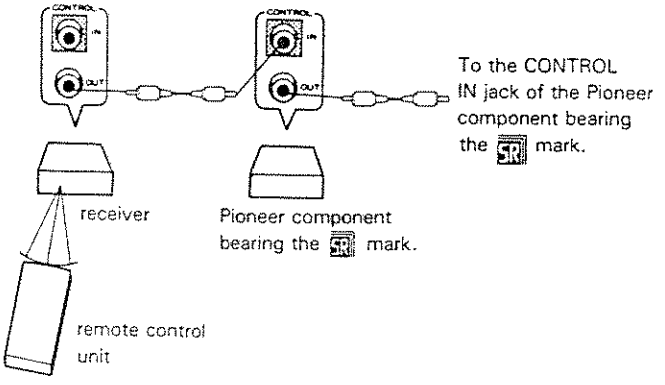
The equipment should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.

NOTE:
Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLETS in order to avoid overheating or fire risk.
This can cause the receiver to malfunction.

⑩ Audio INPUT jacks
PHONO .... Connect to turntable.
CD ..... Connect to compact disc player.

⑪ CONTROL IN, OUT jacks
Used for system control with other Pioneer components bearing the SR mark.
IN ..... For connection from the CONTROL OUT jack of another component.
OUT .... For connection to the CONTROL IN jack of another component.

NOTE:
The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.



⑫ TAPE1/DAT1 jacks

Connect a DAT (digital audio tape deck) or your primary analog tape deck to these jacks.

Connecting for Recording

The tape recording jack (TAPE REC) on the tape deck or DAT should be connected to the REC side of the TAPE1/DAT1 jack on the receiver with a pin plug connecting cord.

Connecting for Playback

Connect the TAPE PLAY jack on the tape deck or DAT to the PLAY side of the TAPE1/DAT1 jack on the receiver with a pin plug connecting cord.

⑬ TAPE2/DAT2 jacks

Connect a second tape deck to or DAT these jacks.

Connecting for Recording

The tape recording jack (TAPE REC) on the tape deck should be connected to the REC side of the TAPE2/DAT2 jack on the receiver with a pin plug connecting cord.

Connecting for Playback

Connect the TAPE PLAY jack on the tape deck to the PLAY side of the TAPE2/DAT2 jack on the receiver with a pin plug connecting cord.

⑭ TV jacks

Use these jacks if wish to connect a TV tuner having both video and audio outputs.

[VIDEO IN]

Connect the TV tuner's video output to this jack.

[AUDIO IN (L, R)]

Connect the TV tuner's audio output to these jacks.

⑮ VDP/CDV jacks

[VIDEO IN]

When watching the video image from a LD player (VDP), CDV player or a VCR used for playback, connect its VIDEO OUTPUT jack here.

[AUDIO IN (L,R)]

When playing back the audio channel from a LD player (VDP), CDV player or a VCR for playback, connect its AUDIO OUTPUT jacks here.

⑯ VCR1 jacks

[VIDEO OUT]

When copying program material from the video component connected to the VCR2, VDP or TV jacks, connect to the VIDEO INPUT jack of the VCR used for recording.

[AUDIO OUT (L, R)]

When copying program material from the video component connected to the VCR2 or VDP jacks, or when recording music from an audio component source, connect to the AUDIO INPUT jacks of the VCR used for recording.

[VIDEO IN]

When monitoring the video image from a VCR used for playing, connect its VIDEO OUTPUT jack here.

[AUDIO IN (L, R)]

When monitoring the audio channnel from a VCR used for playing, connect its AUDIO OUTPUT jacks here.

⑰ VCR2 jacks

[VIDEO OUT]

When copying program materials from the video component connected to the VCR1, VDP or TV jack, connect to the VIDEO INPUT jack of the VCR used for recording.

[AUDIO OUT (L, R)]

When copying program materials from the video component connected to the VCR1, VDP or TV jacks, or when recording music from an audio component source, connect to the AUDIO INPUT jacks of the VCR used for recording.

[VIDEO IN]

When monitoring the video image from a VCR used for playing, connect its VIDEO OUTPUT jack here.

[AUDIO IN (L, R)]

When monitoring the audio channnel from a VCR used for playing, connect its AUDIO OUTPUT jacks here.

⑱ FRONT PRE-OUT jacks

When a separate power ampifier is used to drive the front speakers, connect the power amplifier to these jacks.

⑲ FRONT POWER IN jacks

When a separate pre-amplifier is connected and this unit is used as power amplifier, connect the pre-amplifier to these jacks.

⑳ REAR SPEAKERS terminals

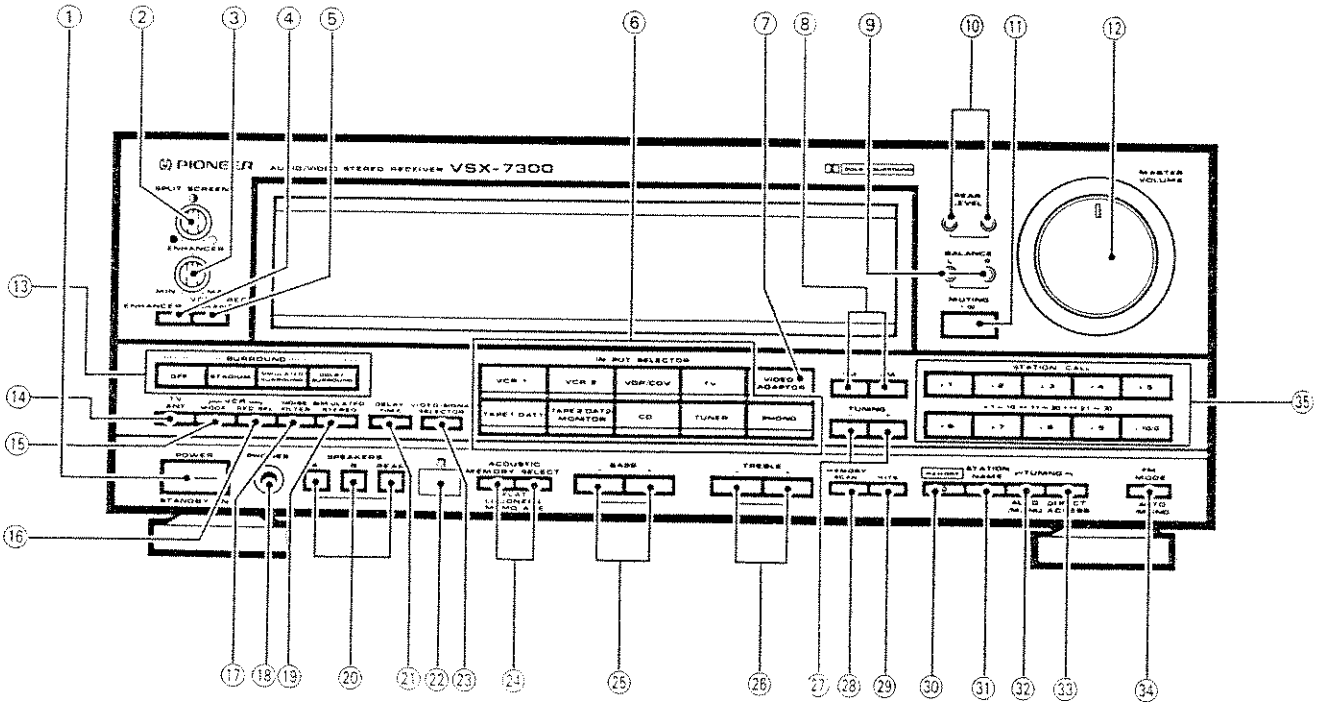
Connect the surround rear speakers to these terminals.

NOTE:

Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

㉑ Power cord

FRONT PANEL FACILITIES



① POWER STANDBY/ON switch

When this switch is pressed, power is supplied to the unit. Press the switch again to turn power off

[Timer ON/OFF possible]

When the unit is switched ON, ON/OFF control can be performed by means of the optional timer.

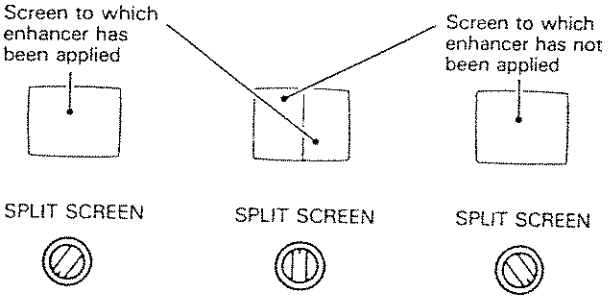
NOTE:

When the power is initially turned ON, muting will be applied to prevent sound from being output for about 5 seconds.

② SPLIT SCREEN control

This spilt screen function can be used when the ENHANCER switch is on.

This control allows you to freely control the area of enhanced picture (on right side of screen) and original picture (non-enhanced, on left side of screen) by means of a vertical line dividing the screen into two sections.


Screen to which enhancer has been applied
Screen to which enhancer has not been applied
SPLIT SCREEN
SPLIT SCREEN
SPLIT SCREEN

NOTE:

This line is not output from the VCR (VCR1 and VCR2) VIDEO OUT jacks. As a result, the split screen image is not recorded; the recorded image will be entirely that produced by the enhancer function.

③ ENHANCER control

When performing tape copying with a VCR, some deterioration in image quality occurs normally. This control allows compensation for this deterioration in image quality by emphasizing image detail.

NOTE:

The ENHANCER control functions to suppress image deterioration, but will not improve image quality beyound its original state.

④ ENHANCER switch

Press when performing video copying with added video enhancer effets. When the switch is pressed, the monitored video image will be the split screen picture.

Using the SPLIT SCREEN function will enable you to compare the enhanced and original (unenhanced) images.

⑤ VCR1 REC ENHANCER switch

Turn this switch ON to record on the VCR connected to the VCR 1 jacks the video image from VCR 2 or VDP with enhancement applied using the ENHANCER control knob.

NOTE:

- *The VCR1 REC SELECTOR must be on for the VCR1 REC ENHANCER switch to operate. At this time, the enhancer is turned off for the monitor and VCR2 REC OUT.*

⑥ Audio/Video INPUT SELECTOR switches

VCR1: Press when performing playback on a VCR unit.

VCR2: Press when performing playback on a second VCR unit.

VDP/CDV: Press when performing playback on a video disc player (VDP) or CDV player.

TV: Press to watch TV broadcasts from the TV tuner connected to the rear panel TV terminals.

TAPE 1/DAT 1: Press when performing playback on a DAT or tape deck.

TAPE 2/DAT 2 MONITOR: Press when performing playback on a second tape deck and when monitoring recording.

CD: Press when playing compact discs on a CD player.

TUNER: Press when listening to radio broadcasts.

PHONO: Press when playing records on turntable.

⑦ VIDEO ADAPTOR switch

Press when using a video adaptor component connected to the rear panel VIDEO ADAPTOR terminals. An indicator on the display section lights when this switch is set to ON.

⑧ BAND selector switches

FM: Press for FM reception.

AM: Press for AM reception.

⑨ BALANCE switches

Use to adjust the sound volume balance between left and right speakers.

L: Press to decrease the sound on the right side.

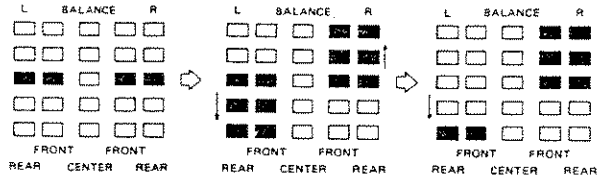
R: Press to decrease the sound on the left side.

Press L and R together to bring the volume balance back to center.

NOTE:

The left-right sound volume balance cannot be adjusted independently on the front and surround rear speakers.

Exanple: If press and keep the "R" switch.



⑩ REAR LEVEL (–, +) switches

Operate only when the surround mode is on.

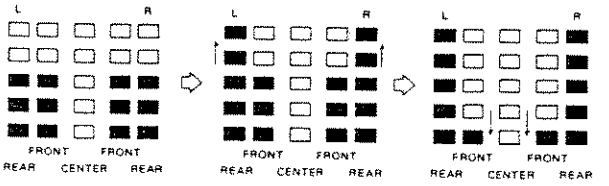
These switches are used to preset the sound level difference between the front and surround speakers. In this way, after presetting the difference, the overall volume of the front and surround rear speakers can be changed using the MASTER VOLUME control, while still maintaining the sound volume differential.

– : Surround rear speaker volume is reduced.

+ : Surround rear speaker volume is increasd.

To reset press – and + together to restore front and surround to the default volume balance setting.

Exanple: If press and keep the "+" switch.



⑪ MUTING switch
Press to temporaliry cut off the sound volume. The display section MUTING indicator will flash. When pressed agein, the sound will return to its previous level.

⑫ MASTER VOLUME control
Use to simultaneously adjust the sound volume from the front and surrond speakers.

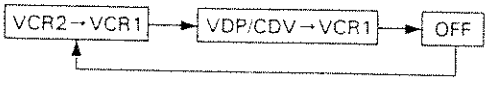
⑬ SURROUND Mode Selector Switches
OFF:
To cancel the surround function.
STADIUM:
Ideal for sports broadcasts, etc.
SIMULATED SURROUND:
Gives concert-hall presence to monaural sound (AM, TV, etc.).
DOLBY SURROUND
Select this setting when watching video tapes or video discs bearing the DOLBY STEREO or DOLBY SURROUND mark.

⑭ TV ANT (VIDEO/TV) selector switch
This switch can be used in place of the TV ANT switch on the RF Modulator JA-RF5 (sold separetely). This is effective only when the JA-RF5's TV ANT switch is set to the VIDEO position. For example:
In VIDEO mode (TV-ANT indicator in the display section goes out):
Allows you to use video components connected to the receiver.
In TV mode (TV-ANT indicator in the display section lights):
Connects the TV antenna, thus allowing you to view normal TV broadcasts. The TV mode is selected when the receiver's power is off.

NOTE:
- *When in the VIDEO mode, no sound will be produced from the TV set's speakers. Listen using the speakers connected to the receiver.*
- *Noise may be produced if the TV set's volume control is turned up. Turn down the set's volume control when listening.*
- *This switch functions only when the TV ANT selector switch on the RF Modulator is set to "VIDEO".*
- *This is set to VIDEO when the power is turned on.*

⑮ VCR MODE switch
Toggles the VCR 1 signal between mono and stereo. It operates both during playback and during recording.

⑯ VCR1 REC SELECTOR switch
Use this switch to select the VCR 1 copy mode independent of the INPUT SELECTOR switch setting. Each time you press it the unit switches between the following three settings. The current setting is shown on the central display section.



NOTE:
At the OFF position, the video source selected by the INPUT SELECTOR is output at the REC terminal.

⑰ VCR NOISE FILTER switch
If tape hiss is noticeable while performing playback of video cassette tapes, press this switch to reduce the noise.
After pressing this switch, "VCR NOISE FILTER" will appear on the display panel.

NOTE:
- *This switch can be used when either VCR1 or VCR2 function switches is selected.*
- *The effectiveness in reducing high-frequency hiss noise varies depending on the type of tape used, the recording level, and other conditions.*

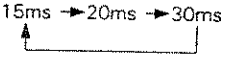
⑱ PHONES jack
Connect the plug on your hedphones to this jack. To listen to a program through the headphones, set all SPEAKERS A, B and REAR switches to the OFF position.

⑲ SIMULATED STEREO switch
Press to produce a simulated stereo effect when listening to monaural souces (for example AM or TV broadcasts).
"SIMULATED STEREO" appears on the display section.

NOTE:
This effect is not produced through the surround rear speakers.

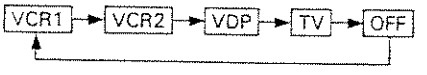
⑳ SPEAKER switches (A, B, REAR)
ON/OFF switches for the A, B and rear surround speaker systems. An indicator on the display section lights when any of these switches is set to ON.

㉑ DELAY TIME switch
Operates only when the surround mode is ON.
Switches the sorround delay time in three steps. for DOLBY SURROUND, 20ms is standard.



㉒ Remote signal sensor

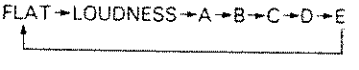
㉓ VIDEO SIGNAL SELECTOR switch
When recording simulcast programs, the recorded image can be selected from among VCR1, VCR2, VDP and TV.



The current setting is shown by an indicator on the display section.

NOTE:
When using a VCR for sound recording only, follow the operating instructions of the VCR.

㉔ ACOUSTIC Switch
MEMORY:
Pressing this switch will result in the memorization of the sound quality (tone control condition). Press again to cancel this mode.
SELECT
- This switch is used to preset the five acoustic memories (A—E).
- This switch is also used to recall previously set sound quality settings. Each time you press the switch, the sound quality setting advances in the order shown below.



FLAT: For flat (normal) frequency response.
LOUDNESS: Emphasizes the low- and high- frequency ranges. Produces a fuller sense of sound, particularly when listening at low volume.
A—E: Memorized acoustic memory settings.
Presetting the acoustic memory
❶ **Adjust the sound quality as desired using the BASS and TREBLE control switches.**
- Settings are shown by the TONE indicator on the display section.

❷ **Press the ACOUSTIC MEMORY switch.**
- The TONE indicator on the display section blinks on and off.

❸ **Press the ACOUSTIC SELECT switch and select the sign to which you wish to assign the setting (A — E).**
- The sound quality setting is memorized approximately two seconds after you last press the ACOUSTIC SELECT switch.

In this way, the desired tone will be preset in one of the five acoustic memory positions. To preset four other desired tone settings, perform the same operations.
To recall the memorized tone setttings, press the ACOUSTIC SELECT switch to select the desired memory position. In this way, five different tone settings can be preset and recalled in the five positions of the acoustic memory.

㉕ BASS control switches
Use to adjust the low-frequency level. Press the + switch to increase low-frequency level, and the − switch to decrease it.
The TONE indicator appears on the display section.
When both sides (+, −) of the BASS control are pressed simultaneously, the base response will be set to the flat (normal) condition.

㉖ TREBLE control switches
Use to adjust the high-frequency level. Press the + switch to increase high-frequency level, and the − switch to decrease it.
The TONE indicator appears on the display section.
When both sides (+, −) of the TREBLE control are pressed simultaneously, the treble response will be set to the flat (normal) condition.

㉗ TUNING switches
+: Performs tuning from the currently displayed station frequency in ascending frequency order.
−: Performs tuning in order to descending frequncies.

㉘ MEMORY SCAN switch
Operates when the INPUT SELECTOR is set to TUNER. Station frequencies assigned to the STATION CALL switches are tuned in, one after another beginning with station no. 1, for approximately 5 seconds each. The display section SCAN indicator will light. Press the switch again and the tuner remains tuned in to the station playing when the switch was pressed the second time.
Station frequencies not assigned station numbers in the memory are skipped.

㉙ HITS (Hyper Intelligent Tuning System) switch
- If the HITS switch is pressed at the currently displayed station frequency, the receiver searches up and down the frequency for the next station (The SEARCH indicator in the display section lights at this time.) and stops at the first one it finds.
- If the HITS switch is pressed during STATION NAME input (see page 25), the receiver performs a memory search in order of ascending station number for memorized stations whose names begin with the same letter as the station just input.
- If the HITS switch is pressed during input of numbers for DIRECT ACCESS tuning, the receiver sets the remaining digits which have not yet been input to "0", searches for the corresponding frequencies, and stops on the first station it finds.

NOTE:
- *The system searches within successive 1MHz ranges for stations which can be tuned in. During DIRECT ACCESS tuning, it searches up and down for a station until it reaches the edges of the band. If no receivable station is found within the band range, the receiver returns to the state it was in before the HITS switch was pressed.*
- *If the upper (or lower) frequency limit of the receiver is encountered during HITS operation, the receiver stops searching in that direction but continues to search in the other.*

㉚ MEMORY switch
When the unit is in the frequency display mode, pressing this switch will result in the memorization of the current broadcast band, reception frequency, ACOUSTIC MEMORY position, and FM AUTO/MONO mode.
This switch is also used to input station names (see page 25).

㉛ STATION NAME switch
This switch is used when inputting station names (see page 25).

㉜ AUTO/MANUAL TUNING selector switch
This switched is used to select the tuning mode. The AUTO tuning mode has been selected when the TUNING AUTO indicator ilghts.
AUTO tuning
When the − or + TUNING switch is pressed, the receiver automatically scans the broadcast station frequencies. When a broadcast is detected, the scanning stops at that frequency.

NOTE:
Pressing the TUNING switch (− or +) while scanning is taking place causes scanning to stop.
MANUAL tuning
This is the usual tuning method. Each time the − or + TUNING switch is pressed, the reception frequency is changed by one tuning step. When pressed continuously, the receiver scans the broadcast frequencies continuously.

㉝ DIRECT ACCESS TUNING switch
When this switch is pressed, the STATION CALL switches function as ten-key number switches for direct input of the desired reception frequency.
If the input station falls outside of the receiver's tuning range, the display section will display a message: "UPPER" if the frequency is too high and "LOWER" if it is too low.

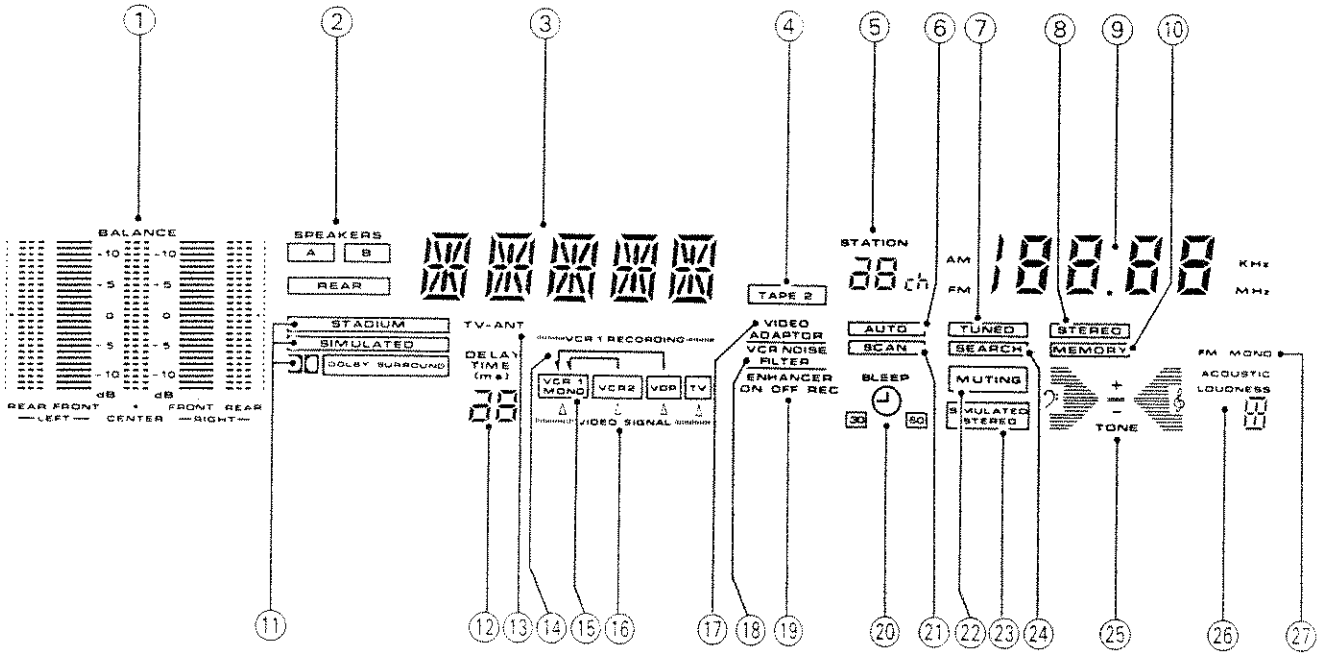
㉞ FM MODE AUTO/MONO selector switch
Use to select the auto stereo mode or monaural mode when listenig to FM broadcasts. The monaural mode has been selected when the FM MONO indicator in the display section is lit.
Auto stereo mode:
Normally, leave in this mode for reception. When a stereo FM broadcast is received, it will be automatically reproduced in stereo.
Monaural mode:
When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

NOTE:
This switched has no effect on reception of AM broadcasts.

㉟ STATION CALL RANDOM 30 CH switches
- These switches are used to preset and recall desired broadcasting stations, FM AUTO/MONO mode and ACOUSTIC MEMORY mode.
  Station call operation example:
  If you press the [*2] key:
  - One time − station 2 is selected.
  - Two times − station 12 is selected.
  - Three times − station 22 is selected.

NOTE:
Pressing the STATION CALL switches when a component other than TUNER is selected causes the INPUT SELECTOR setting to switch to TUNER.
- They are also used when performing direct access tuning.

[DISPLAY SECTION]



[DISPLAY SECTION]

① **BALANCE/LEVEL meters**

② **SPEAKERS A, B, REAR indicators**
Shows which speaker system (or systems) are switched ON.

③ **Alphanumeric display**

④ **TAPE 2 indicator**
Lights when the INPUT SELECTOR is set to TAPE 2 MONITOR ON.

⑤ **STATION display**
Shows the channel selected with the STATION CALL switch.

⑥ **AUTO indicator**
Lights when the FM MODE is auto stereo.

⑦ **TUNED indicator**
Lights when a station is tuned.

⑧ **STEREO indicator**
Lights when a stereo FM broadcast is being received.

⑨ **Frequency display**

⑩ **MEMORY indicator**

⑪ **Surround mode indicators**

⑫ **DELAY TIME display**
Shows the delay time during surround operation.

⑬ **TV-ANT indicator**
Lights when TV mode is selected with the TV ANT switch.

⑭ **VCR1 RECORDING display**
Displays a "↓]" symbol to indicate the copy mode selected with the VCR1 REC SELECTOR switch.

⑮ **VCR1 MONO indicator**

⑯ **VIDEO SIGNAL SELECTOR indicators**
Shows the video component selected with the V-SIGNAL SELECTOR switch.

⑰ **VIDEO ADAPTOR indicator**
Lights when the VIDEO ADAPTOR switch is in the ON position.

⑱ **VCR NOISE FILTER indicator**
Lights when the VCR NOISE FILTER switch is in the ON position.

⑲ **ENHANCER ON, OFF, REC indicators**
Shows the current VIDEO enhancer setting.

⑳ **SLEEP timer indicators**
Shows the SLEEP timer setting (the length of time from the set time to the point at which power will switch off) only remote control.

㉑ **SCAN indicator**
Lights during memory scan operation.

㉒ **MUTING indicator**

㉓ **SIMULATED STEREO indicator**

㉔ **SEARCH indicator**
Lights during HITS operation.

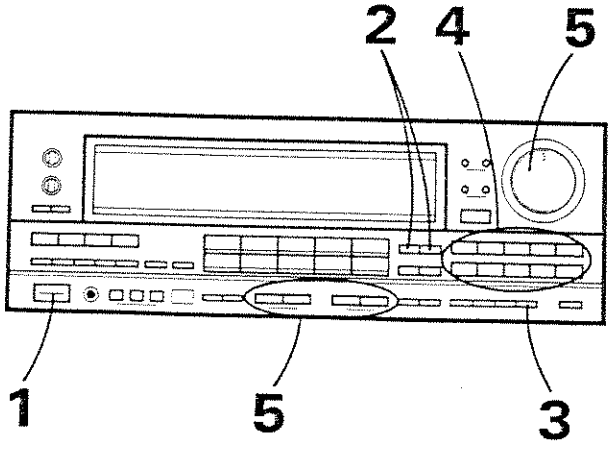
㉕ **TONE level meter**
Shows the settings of the BASS and TREBLE level.

㉖ **ACOUSTIC display**
Shows the setting of the ACOUSTIC SELECT switch.

㉗ **FM MONO indicator**
Lights when the FM MONO mode is selected with the FM MODE switch.

PREPARATIONS FOR BROADCAST RECEPTION

DIRECT ACCESS TUNING



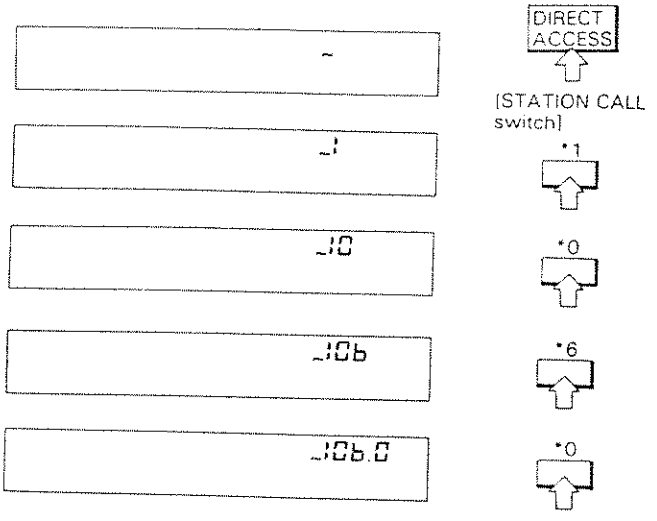
When you know the frequency of the desired station, the frequency can be input directly using the STATION CALL (number) switches in the following way:

1. **Press the POWER switch to the ON position.**

NOTE:
Be sure to turn the TAPE/DAT 2 MONITOR switch OFF when listening to AM or FM broadcasts.

2. **Select either FM or AM using the BAND selector.**
3. **Press the DIRECT ACCESS switch.**
4. **Input the desired station frequency using the STATION CALL switches.**

Example 1: To receive FM 106.00MHz



Once the station frequency has been input, the receiver tunes in that frequency. If the input frequency falls below the lower or higher limit of the receiver's receivable frequency range (FM: 87.5MHz – 108MHz; AM: 530kHz – 1,700kHz) "LOWER" or "UPPER" is displayed, indicating that the frequency which has been input cannot be tuned in.

5. Adjust the MASTER VOLUME and tone as desired.

To cancel frequency input

If none of the STATION CALL switches (*1 – *0) are pressed for a period of approximately five seconds, the unit returns to the state it was in before the DIRECT ACCESS switch was pressed.

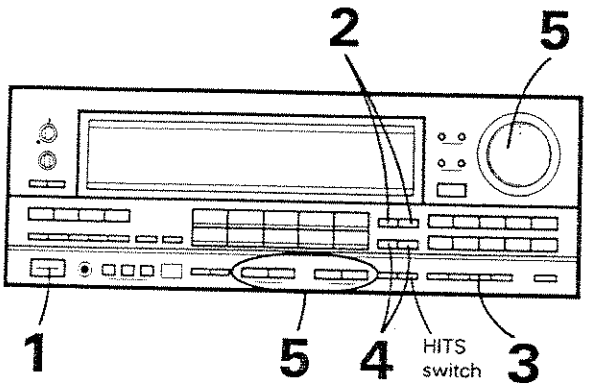
Notes regarding FM direct access tuning

- When the CHANNEL STEP switch is set to the FM100 kHz position, there is no need to input the last digit "0" of the desired station frequency. Depending on the station frequency, inputting the first two or three digits is offen sufficient.

HITS function

Press the HITS switch during frequency input and the remaining digits are assigned zeros. The receiver then searches over a frequency band edge from that center frequency for the nearest station and tunes in the first one it finds. If no receivable station is found within the band range, the receiver returns to the state it was in before the HITS switch was pressed.

AUTO OR MANUAL TUNING



AUTO tuning:

Auto tuning is convenient when you do not remember the frequency of a desired station, or when you wish to find stations that you do not normally listen to.

MANUAL tuning:

This is the "normal" tuning mode. Each time the TUNING switch "+" or "–" is pressed, the tuning frequency changes by one step, allowing you to find stations manually.

1. Press the POWER switch to the ON position.

NOTE:

Be sure to turn the TAPE2/DAT2 MONITOR switch OFF when listening to AM or FM broadcasts.

2. Use the BAND selector to choose either FM or AM.

For AUTO tuning:

3. Set the AUTO/MANUAL switch to the auto tuning mode.
- In the Auto Tuning mode, the [AUTO] indicator will light.

4. Press the "+" or "–" switch of the TUNING switches.
- Pressing "+" causes scanning to take place in the direction of increasing frequency. Pressing "–" causes scanning to take place in the direction of decreasing frequency.
- When a station is received, scanning will stop (the [TUNED] indicator lights). If you wish to receive a different station, press the TUNING switch ("+" or "–") again.

For MANUAL tuning:

3. Set the AUTO/MANUAL switch to the manual tuning mode.
- When in the Manual Tuning mode, the [AUTO] indicator will go out.

4. Press the "+" or "–" switch of the TUNING switch as necessary to set to the frequency of the desired station.
- Each time the switch is pressed, the tuning frequency will change by one step in the direction corresponding to the switch pressed. When pressed continuously, the reception frequency will also change continuously.
- When a station is received, the [TUNED] indicator will light.
- When the received station is broadcasting a program in FM stereo, the [STEREO] indicator will light. The STEREO indicator will not light if the FM MODE switch is set to FM MONO.

5. Adjust the MASTER VOLUME and tone as desired.

NOTE:

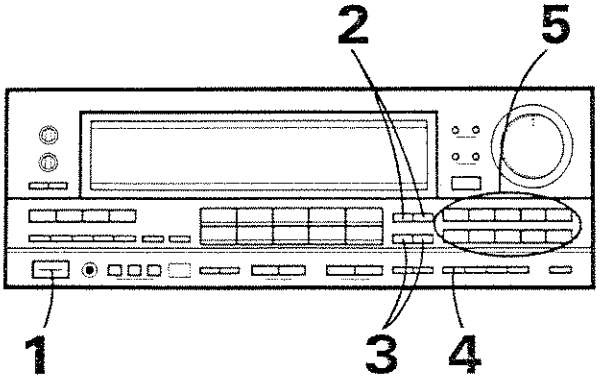
- *When Auto Tuning is used, correct reception may not be possible for very distant stations or stations with very weak signals. In this event, Manual Tuning is recommended.*
- *The [TUNED] indicator may not light with broadcasts received over long distances, or when the broadcast signals are extremely weak.*

HITS function

When the HITS switch is pressed, the receiver searches from the current frequency for the nearest station and tunes in the first one it finds. If no receivable station is found within the band range, the receiver returns to the state it was in before the switch was pressed.

PRESET TUNING

FREQUENCY PRESETTING



1. **Press the POWER switch to the ON position.**

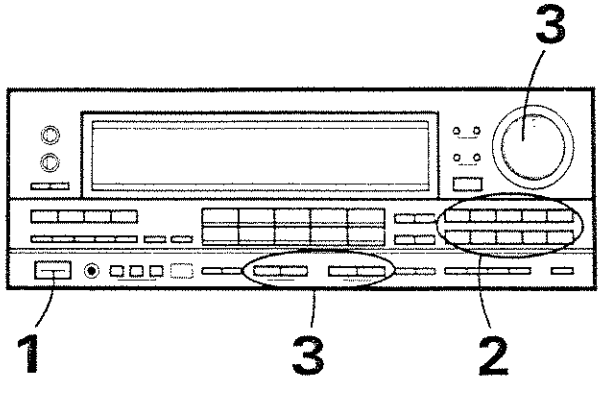
NOTE:
Be sure to turn the TAPE2/DAT2 MONITOR switch OFF when listening to AM or FM broadcasts.

2. **Set the BAND selector to either FM or AM.**
3. **Tune in the desired station.**
   - See the section "DIRECT ACCESS TUNING" for information on reception using the Direct Access Tuning mode.
   - See the section "AUTO TUNING" for information on reception using the Auto Tuning mode.
   - See the section "MANUAL TUNING" for information on reception using the Manual Tuning mode.

In addition to station frequencies, the following items can also be preset.
- FM MODE AUTO/MONO (FM)
- Acoustic setting (FM, AM)

4. **Press the MEMORY switch.**
5. **Press the STATION CALL switch into which you wish to preset the station.**
   - Use the STATION CALL switches (*1 - *0) to select a STATION CH. One press selects the 1 - 10 range, two presses 11 - 20 and three presses 21 - 30.
   (Example) If you press key [*3]:
   One time — STATION 3
   Two times — STATION 13
   Three times — STATION 23
6. **Repeat steps 2 to 5 to preset additioinal stations.**
   A total of 30 AM and FM stations may be preset. If you preset a STATION CALL switch into which a station has already been memorized, the former station information will be erased and the new station will be memorized in its place.

LISTENING TO BROADCASTS USING PRESET TUNING



1. **Press the POWER switch to the ON position.**
2. **Press the STATION CALL switch into which the desired station has been preset.**
   - Use the STATION CALL switches (*1 - *0) to select a STATION CH. One press selects the 1 - 10 range, two presses 11 - 20 and three presses 21 - 30.
   (Example) If you press key [*3]:
   One time — STATION 3
   Two times — STATION 13
   Three times — STATION 23
   - When the INPUT SELECTOR is set to a function other than TUNER, it will switch to the TUNER function automatically if one of the STATION CALL switches is pressed.

Tuning can be performed simply and accurately following the above procedure.

3. **Adjust the MASTER VOLUME and tone as desired.**

NOTE:
The contents of the STATION CALL switch will be preserved for several days, even if the receiver power cord is unplugged.
If a preset station has been erased, preset it again.

Last station memory

When the POWER switch is pressed to turn power on, the last station received before the power was previously turned off will be tuned in again.
When the power is ON, if one of the BAND selector switches is pressed, the last station received before the BAND selector switch was previously pressed will be tuned in again.

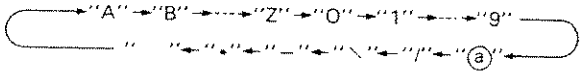
DISPLAYING STATION NAMES

If desired, you may memorize station call-letters and display them. In this case, use the call-letter mode.

Memorizing with the call-letter mode.

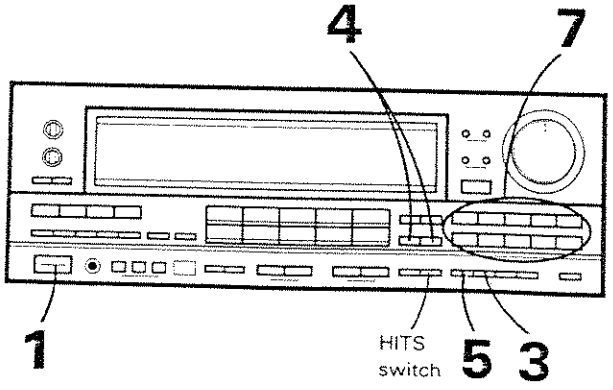
- A maximum of four characters can be memorized.

1. **Press the POWER switch to the ON position.**
2. **Tune in the desired station.**
   - If the desired station already has a STATION CALL No. assigned, select it using the appropriate STATION CALL switch. (In this case step 7 can be omitted.)
   - If you wish to preset the station and input the station call letters, use DIRECT ACCESS TUNING or the TUNING switches to select the desired station. In this case step 7 should not be omitted.
3. **Press the STATION NAME switch to put the receiver in the call-letter mode.**
4. **Press the TUNING (+, –) switches to select the desired characters.**
   - When the "+" of the TUNING switch is pressed, the characters will change in order, in the direction of the arrow. When the "–" is pressed, the characters will change in reverse direction of the arrow.



5. **Press the MEMORY switch.**
   - The first character selected will be memorized and the operation will move to the next character. In this case, the same character as that previously set will be displayed flashing.
6. **By repeating steps 4 and 5 up to four characters can be memorized.**
   - If you used one of the STATION CALL switches to tune in the broadcast, the station call-letters you just input will be memorized along with the station no.
7. **(If there is no STATION CALL No.)**
   Use the appropriate STATION CALL switch to select the STATION CALL No. (1 - 30) you wish to memorize.
   - Both the number you preset with the STATION CALL switches and the station call letters are memorized.

NOTE:
If the FUNCTION switches are pressed, the setting procedure will be interrupted and setting will be aborted.



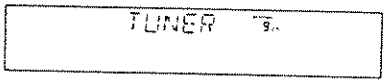
Example: To set the name "JAZZ" into STATION CALL switch CH 19.

Select CH 19 (Press [•9] twice).

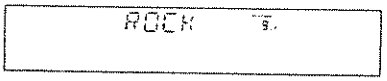
2 → [•9]

When no station name has been previously memorized

3 →

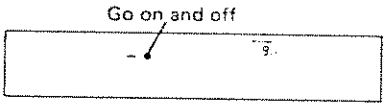


(When a station name has been previously memorized)



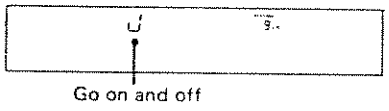
Start: Wait about one second (once started, "A" will appear).

4 → STATION NAME



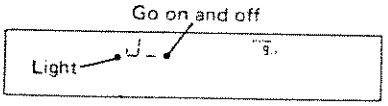
When "J" appears, release your finger from the TUNING switch.

5 → TUNING – +



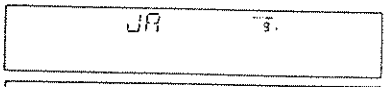
When one character is set

6 → MEMORY



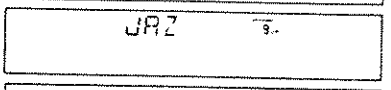
Repeat the operation for the other characters.

7 → TUNING "+" side

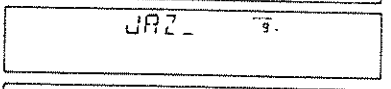


MEMORY

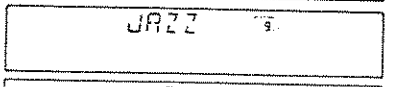
TUNING "+" side



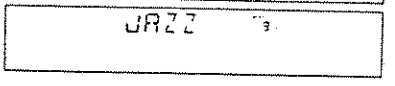
MEMORY



TUNING "+" side



MEMORY

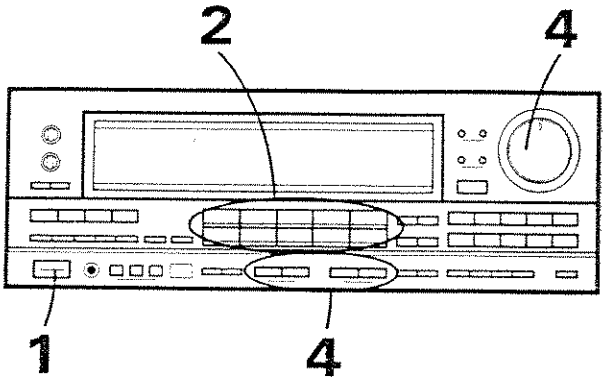


If all four characters are not set, the new name will not be memorized. When there are no characters to input, use the space (" ").
If frequencies are not yet stored in STATION CALL switches, tune in a station using direct access or manual tuning, and then store it in one of the STATION CALL switches.

HITS function

Press the HITS switch during station call-letter input and the receiver performs a memory scan for other stations in the STATION CALL memory which begin with the same letter (s) (one to four characters) as those you have input (starting from the left). (Each is tuned in for approximately 5 seconds. Press the HITS switch to cancel.)
In the example above, if you press the HITS switch after step 5, then the receiver will scan stations begining with the letter "J."

LISTENING TO OTHER MUSIC SOURCES



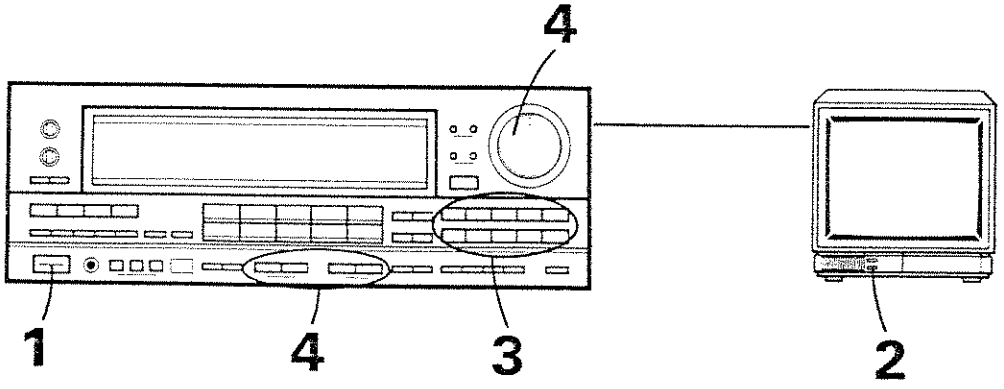
1. Press the POWER switch to the ON position, and turn on the power to the other audio components you wish to use.
2. Use the INPUT SELECTOR switches as required to select the desired program source.

Program Source	INPUT SELECTOR switch
To listen to records.	PHONO
To listen to compact discs.	CD
To listen to a tape on the tape deck (or digital audio tape deck) connected to TAPE1/DAT1 jacks.	TAPE1/DAT1
To listen to a tape on the tape deck (or digital audio tape deck) connected to TAPE2/DAT2 jacks.	TAPE2/DAT2 MONITOR
To watch a video cassette tape on the VCR connected to VCR1 jacks.	VCR1
To watch a video cassette tape on the VCR connected to VCR2 jacks.	VCR2
To watch a video disc on a video disc player, or to watch a CDV on a CDV player.	VDP/CDV
To watch TV broadcasts using a TV tuner connected to the TV terminals.	TV

* Before selecting an INPUT SELECTOR switch, turn TAPE 2/DAT 2 MONITOR OFF.

3. Operate the appropriate audio/video component to play back the program source.
4. Adjust the volume and tone controls as desired.

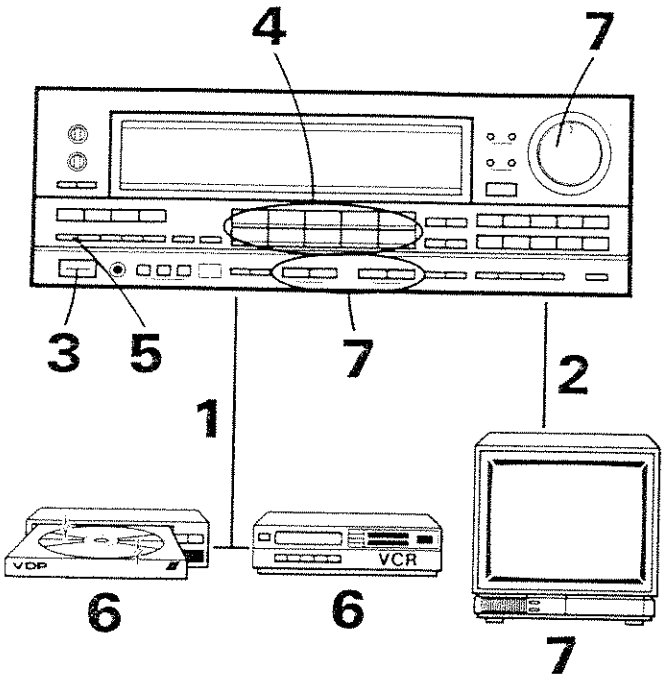
RECEIVING FM SIMULCAST TV PROGRAMS



By combining a TV set and a VCR (or TV tuner), you can receive FM simulcast TV programs (stereo TV sound transmitted from an FM radio station) while viewing the video portion on your TV.

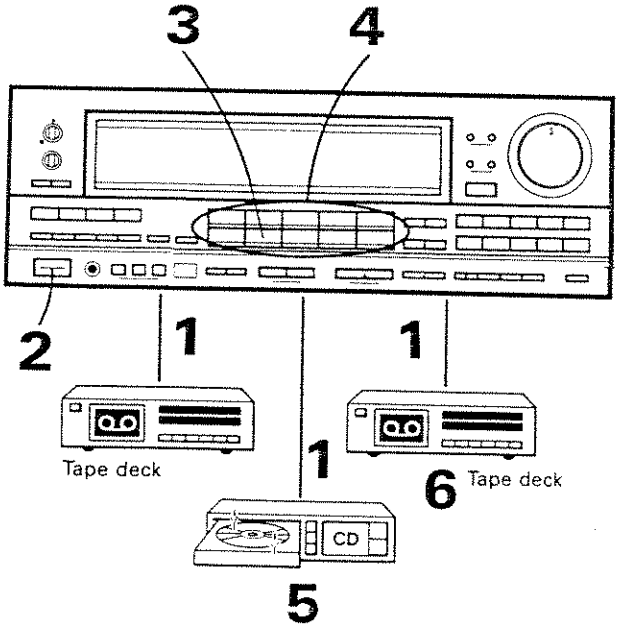
1. Press the POWER switch to the ON position, and turn on the power to the other components to be used.
2. Select the desired TV program with the TV set.
3. Tune in the desired FM simulcast TV program on the receiver.
4. Adjust the volume and tone controls as desired.

USING A TV SET TO WATCH PROGRAMS FROM CONNECTED VIDEO COMPONENTS



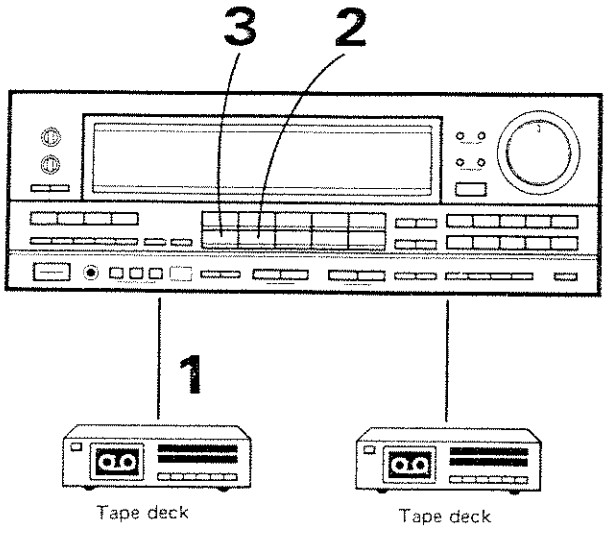
1. Connect the video components to the VCR 1, VCR 2, or VDP/CDV jacks.
2. Connect the TV set.
   - **When using a conventional TV set:**
     Connect RF MODULATOR JA-RF5 (sold separately) to the receiver's VIDEO OUT TO RF MODULATOR terminal. Connect the JA-RF5 and the TV antenna terminal.
   - **When using a TV set equipped with a video input terminal or a monitor TV:**
     Connect the receiver's VIDEO OUT TO MONITOR TV 1 (or 2) terminal and the TV (or monitor TV) video input terminal).
3. **Press the POWER switch to the ON position, and turn on the power to the other components used.**
4. **Set the INPUT SELECTOR switch to the appropriate video component to be played back.**
5. **Set the TV ANT switch so that the TV-ANT indicator goes out in the display section. (only using the conventional TV set)**
6. **Play back the video component.**
7. **Operate the TV set to display the playback picture.**
   - Set the TV set's channel to the same open channel as selected on the RF modulator.
   - When using a TV set equipped with video input terminals, set to the video input playback mode.

RECORDING WITH A TAPE DECK



RECORDING

1. Connect the audio source component while referring to the sections "AUDIO SYSTEM CONNECTIONS" and "VIDEO SYSTEM CONNECTIONS."
2. Press the POWER switch to the ON position.
3. **If recording on TAPE 2, turn off the TAPE 2/DAT 2 MONITOR switch.**
   If recording on TAPE 1, the source selected by the INPUT SELECTOR switches will be recorded (excepting TAPE 2/DAT 2).
4. Use the INPUT SELECTOR switch to select the desired program source.
   - To select a TUNER function, press the desired STATION CALL switch if the station has been preset. If the desired station has not been preset, tune in the station using Auto, Manual or Direct Access tuning.
5. **Play the desired program source (record, compact disc, etc.).**
6. **Begin recording by following the operating procedures for the applicable tape deck.**
   - The volume, balance and tone controls have no effect on the recording.



COPYING TAPES

The following operation is TAPE 1 → TAPE 2 copying.
TAPE 2 → TAPE 1 copying is not possible.

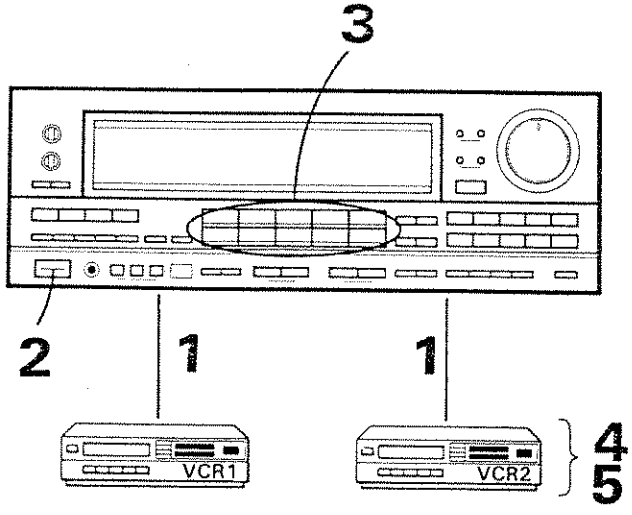
1. **Connect the tape deck to be used for playback to the TAPE1/DAT1 jacks, and the tape deck for recording to the TAPE2/DAT2 jacks.**
2. **If the TAPE2/DAT2 MONITOR switch is ON, press to turn OFF.**
3. **Press the TAPE1/DAT1 switch.**
   - Set the playback deck to the playback mode and simultaneously set the recording deck to the recording mode.
   - If the recording tape deck is equipped with a monitoring function, the recording can be monitored by pressing the TAPE2/DAT2 MONITOR switch to the ON position.

Tape monitoring

When recording is performed on a tape deck equipped with three heads, the recorded sound can be monitored through the speaker system by pressing the TAPE2/DAT2 MONITOR switch. In this case, both recording and playback connections must be made.

NOTE:
If a two-head open-reel or cassette deck is used, monitoring of the recorded sound will not be possible, even if the TAPE2/DAT2 MONITOR switch is pressed. It will still be possible, however to listen to the original program source sound.

Hi-Fi VIDEO RECORDING

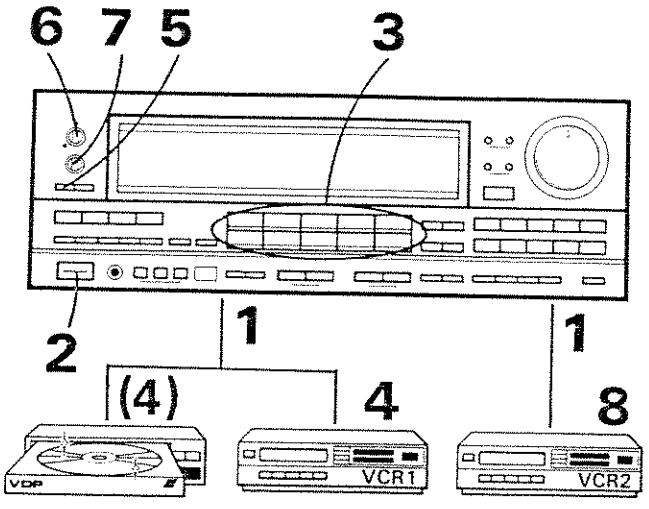


Refer to the connection procedures on pages 7 and 13, and refer to the Hi-Fi VCR's Operating Instructions regarding proper operation procedures. Recording can be performed on both VCR 1 and VCR 2.

RECORDING SOUND ON A VIDEO TAPE

1. **Connect the VCR to be used for recording.**
2. **Press the POWER switch to the ON position. Turn on the power to the Hi-Fi VCR.**
3. **Use the INPUT SELECTOR switch to select the desired program source.**
   - To select a TUNER function, press the desired STATION CALL switch if the station has been preset. If the desired station has not been preset, tune in the station using Auto, Manual or Direct Access tuning.
4. **Insert a video cassette for recording into the Hi-Fi VCR and adjust the recording level.**
   - For details, consult the Operating Instructions for the Hi-Fi VCR used.
5. **Start the program source and set the VCR to the recording mode.**
   - The volume, balance, and tone controls have no effect on the recording.

VIDEO TAPE COPYING



Copying can be performed in either direction between VCR 1 and VCR 2. VCR 1 ⇆ VCR 2

In addition, two identical copies can be made of a program source connected to the VDP/CDV and TV jacks. VDP/CDV, TV → VCR 1, VCR2

1. **Connect the video components to be used.**
2. **Press the POWER switch to the ON position, and turn on the power to the connected VCR (VDP, CDV player).**
3. **Set the INPUT SELECTOR switch to the VCR to be used for playback.**
4. **Set the playback VCR to the playback mode.**

When not using the enhancer function:

5. **Set the ENHANCER switch to OFF.**
   - The ENHANCER OFF indicator will light.
8. **Set the recording VCR to the recording mode.**

When using the enhancer function:

5. **Set the ENHANCER switch to ON.**
   - The ENHANCER ON, REC indicator will light.
6. **Set the SPLIT SCREEN control so that the line is near the middle of the screen.**
7. **Use the ENHANCER control to produce the clearest possible image when the copied video tape cassette is played back.**
   - Perform the adjustment while comparing the original picture (on left of screen) and the enhanced image (on right of screen). Use the control with care since if too much enhancer effect is applied, a poorer image may result.
   - Adjust the image while using the SPLIT SCREEN control to divide the enhanced and original images at various places on the screen.
8. **Set the recording VCR to the recording mode.**

About the Enhancer

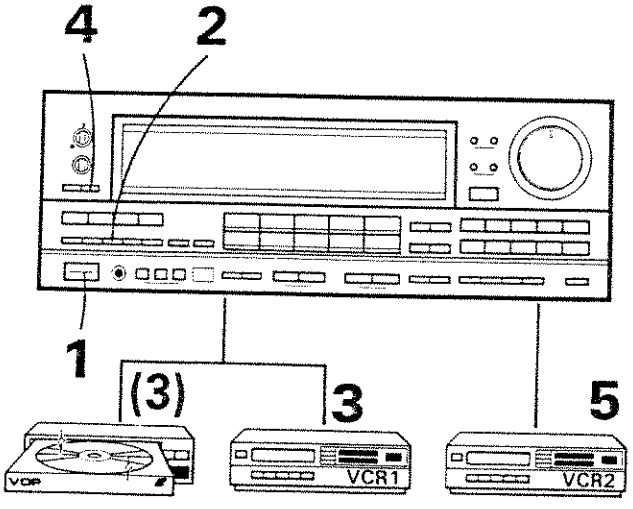
The enchancer operates as follows, according to the settings of the ENHANCER switch and VCR1 REC ENHANCER switch.

ENHANCER indication

ON, REC lit: Enhancer applied to signals VCR1 REC, VCR2 REC, VIDEO OUT, and RF OUT terminals.

REC lit: Enhancer applied to signal from VCR1 REC terminal.

Video copying using the VCR1 REC SELECTOR



It is possible to make video copies from VDP to VCR1 or from VCR2 to VCR1 regardless of the INPUT SELECTOR switch setting. By using the VCR1 REC ENHANCER switch, it is possible to record to VCR1 the enhancer processed signal.

NOTE:
If VCR1 REC ENHANCER is ON, the enhancer will process the image designated with the VCR1 REC SELECTOR. Therefore, the enhancer will not affect the signal from the component selected with the INPUT SELECTOR. The enhancer does not affect VCR2 REC or VIDEO OUT.

1. **Press the POWER switch to the ON position, and turn on the power to the connected components (VCR1 REC, VDP, etc.)**
2. **Select the recording mode with the VCR1 REC SELECTOR switch.**
   - Either the VCR 1 ← VCR 2 or the VCR 1 ← VDP VCR1 RECORDING indicators will light.
3. **Set the VCR2 or video disc player to the playback mode.**

When not using the VCR1 REC ENHANCER function

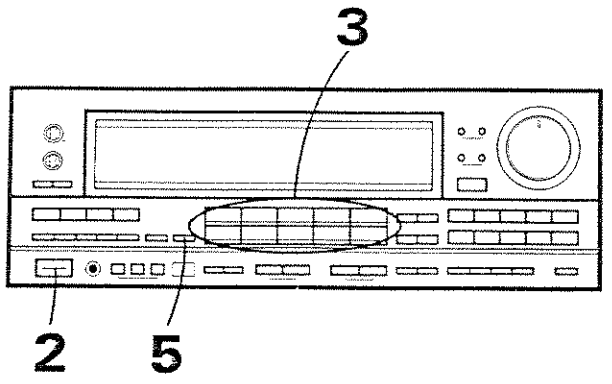
4. **Set the VCR1 REC ENHANCER switch to OFF.**
   - The ENHANCER REC indicator will go out.
5. **Set the VCR1 to the recording mode.**

When using the VCR1 REC ENHANCER function

Set the INPUT SELECTOR switch to the component selected with the VCR REC SEL switch. Follow the instructions in "When using the enhancer function" under "VIDEO TAPE COPYING" to adjust the enhancer control. After adjustments are completed, the INPUT SELECTOR can be set to any component other than VCR 1.

4. **Set the VCR1 REC ENHANCER switch to ON.**
   - The VCR1 REC ENHANCER indicator will light.
5. **Set the VCR 1 to the recording mode.**

USING THE VIDEO SIGNAL SELECTOR



This function can be used to allow you to listen to the playback sound while changing the video image only, thus allowing you to play back and record video images different from the playback sound source. For example, VCR1 can record VCR2 picture mixed with CD sound.

1. Connect the audio and video component to be used.
2. Press the POWER switch to the ON position, and turn on the power to the other components used.
3. Set the INPUT SELECTOR switch to the audio source (CD, for example) to be recorded.
   - To select the tuner function, press the desired STATION CALL switch if the station has been preset. If the desired station has not been preset, tune in the station using Auto or Manual tuning.
4. Load a video cassette tape into the VCR (VCR1, for example) to be used for recording.
5. Set the VIDEO SIGNAL SELECTOR switch to the video component (VCR1, VCR2 or VDP or TV) used for playback. (For example, use VCR2.)

NOTE:

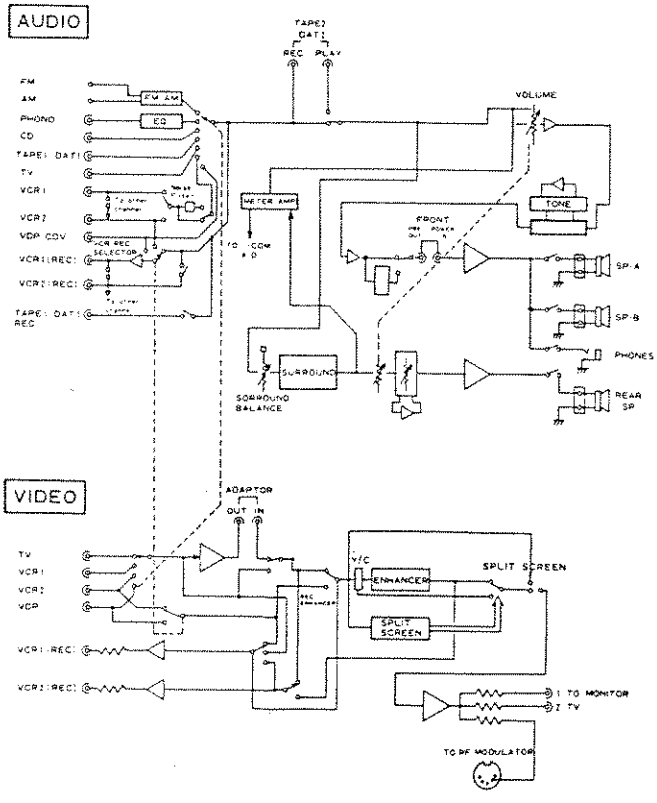
- *At this time, be sure to turn the VIDEO ADAPTOR switch off.*
- *Set the VCR1 REC SELECTOR to OFF.*

6. Set the recording VCR (VCR1, for example) to the recording pause mode.
   - When using the ENHANCER function, see steps 4 – 6 of the section "VIDEO TAPE COPYING: When using the enhancer function."
7. Start playing the desired audio program source (CD, for example).
8. Release the recording pause mode of the recording VCR (VCR1, for example)

CAUTION:

If you must operate the VIDEO SIGNAL SELECTOR switch during recording, do so after setting the recording VCR to the pause mode. If the switch is operated when the tape is traveling during recording, the recorded image and sound may be disrupted at the point at which the switch is operated.

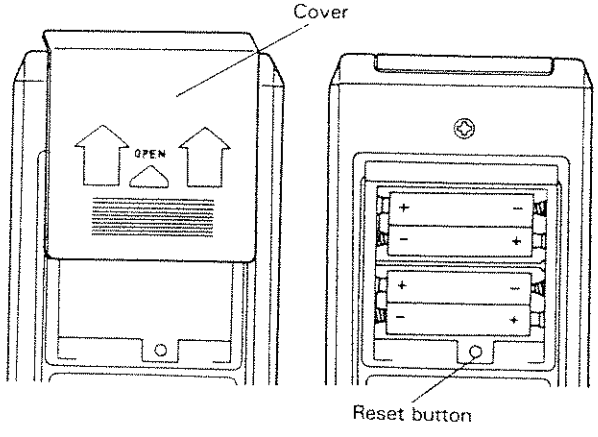
BLOCK DIAGRAM



REMOTE CONTROL OPERATION

LOADING BATTERIES

1. Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you slide it in the direction of the arrow while pressing on it with your thumb.
2. Take out the four supplied batteries (LR03/AM-4), and insert them into the battery compartment in accordance with the indications in the compartment.
3. Close the cover of the battery compartment.



Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:

A.
Always insert batteries into the battery compartment correctly matching the positive (+) and negative (−) polarities, as indicated inside the compartment.

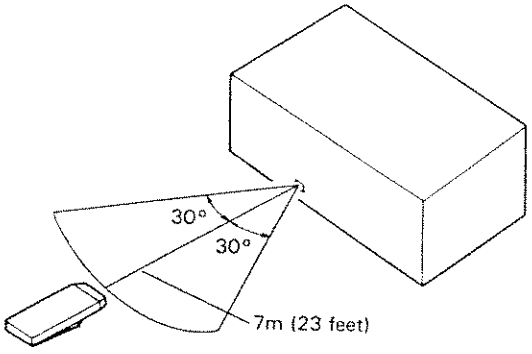
B.
Never mix new and used batteries.

C.
Batteries of the same size may have different voltages, depending on their type. Do not mix different type of batteries.

D.
Both rechargeable and non-rechargeable batteries are available. Be sure to use your batteries in accordance with the caution labels affixed to them.

REMOTE CONTROL RANGE

When operating the remote control unit, point the front of the unit at the front panel of the receiver. The remote control unit may be used within a range of about 7 meters (23 feet) from the remote sensor, within angles of up to about 30 degrees.



Battery Replacement

When the batteries have run out, the transmit indicator will not illuminate even when a key is pressed. Be sure of replace the batteries as soon as possible. As the programmed functions will be retained in memory only as long as batteries are inserted, remove the old batteries only if they can be replaced by new ones immediately.
Also, be sure to always use the specified batteries.

NOTE:
When no batteries are inserted, the programmed memory contents will be erased after 30 to 60 minutes.

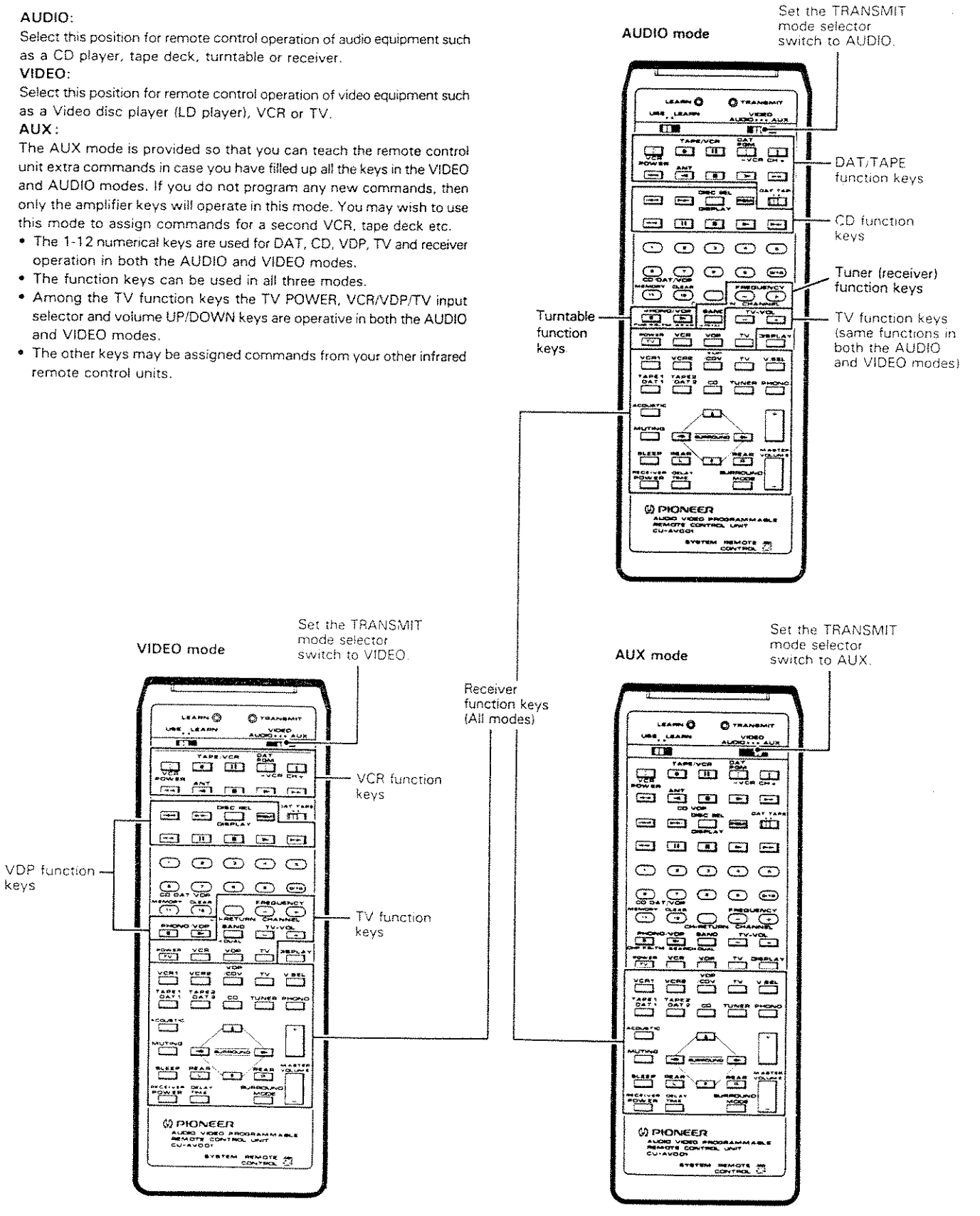
TRANSMIT MODE SELECTOR SWITCH

AUDIO:
Select this position for remote control operation of audio equipment such as a CD player, tape deck, turntable or receiver.

VIDEO:
Select this position for remote control operation of video equipment such as a Video disc player (LD player), VCR or TV.

AUX:
The AUX mode is provided so that you can teach the remote control unit extra commands in case you have filled up all the keys in the VIDEO and AUDIO modes. If you do not program any new commands, then only the amplifier keys will operate in this mode. You may wish to use this mode to assign commands for a second VCR, tape deck etc.

- The 1-12 numerical keys are used for DAT, CD, VDP, TV and receiver operation in both the AUDIO and VIDEO modes.
- The function keys can be used in all three modes.
- Among the TV function keys the TV POWER, VCR/VDP/TV input selector and volume UP/DOWN keys are operative in both the AUDIO and VIDEO modes.
- The other keys may be assigned commands from your other infrared remote control units.


AUDIO mode
Set the TRANSMIT mode selector switch to AUDIO.
DAT/TAPE function keys
CD function keys
Tuner (receiver) function keys
TV function keys (same functions in both the AUDIO and VIDEO modes)
Turntable function keys
Receiver function keys (All modes)
VIDEO mode
Set the TRANSMIT mode selector switch to VIDEO.
VCR function keys
VDP function keys
TV function keys
AUX mode
Set the TRANSMIT mode selector switch to AUX.

■ TAPE DECK OPERATION

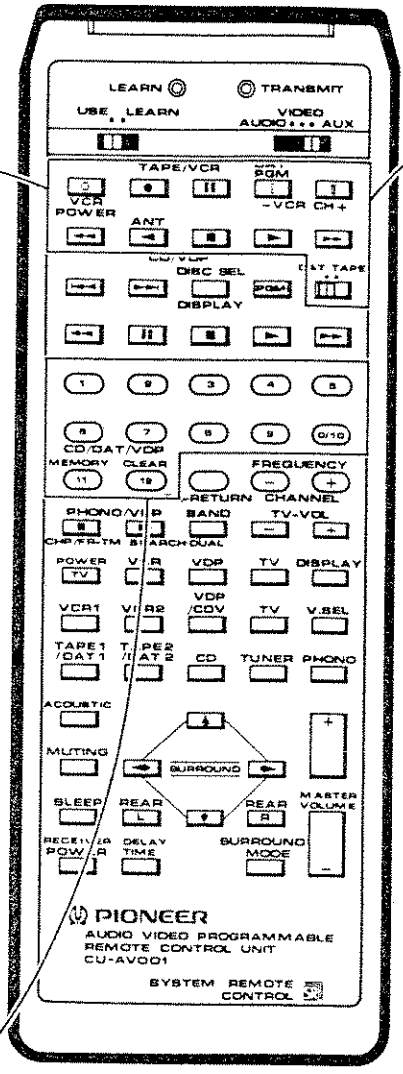
Set the TRANSMIT mode selector switch to AUDIO.

TAPE function keys (operation of cassette tape deck or DAT)

DAT TAPE selector switch:
Set to DAT for operation of a DAT (Digital Audio Tape) deck, and TAPE for operation of a cassette tape deck.

Explanations in square brackets [ ] are for DAT decks only.

- ◌ **(REC MUTE) key:**
  For insertion of silent spaces between selections.
- ● **(REC) key:**
  Selects the recording mode.
- ❚❚ **(PAUSE) key:**
  Temporarily stops tape transport. Press again to resume tape transport.
- I **(DECK I) key:**
  Switches to the deck I functions when using a double cassette tape deck.
  [DAT PGM key]:
  Press to program the DAT deck.
- II **(DECK II) key:**
  Switches to the deck II functions when using a double cassette tape deck.
- ◄◄ **(FF) key:**
  Rapidly advances the tape in the direction of the arrow.
- ◄ **(PLAY) key:**
  Selects reverse playback.
- ■ **(STOP) key:**
  Stops the tape transport.
- ► **(PLAY) key:**
  Selects forward playback.
- ►► **(FF) key:**
  Rapidly advances the tape in the direction of the arrow.
- **[1 – 0/10 (numeric) keys]:**
  For entering desired selections into the memory.
  [MEMORY key]:
  Stores the program in the memory.
  [CLEAR key]:
  Clears the program stored in the memory.



■ VCR OPERATION:

Set the TRANSMIT mode selector switch to VIDEO.

VCR function keys (operation of VCR)

- ◌ **VCR POWER key:**
  Switches VCR power ON/OFF.
- ● **(REC) key:**
  Selects the recording mode.
- ❚❚ **(PAUSE/STILL) key:**
  Sets pause and still picture.
- I **VCR CH – (DOWN) key:**
  Shifts channels in descending order.
- II **VCR CH + (UP) key:**
  Shifts channels in ascending order.
- ◄◄ **(REW) key:**
  Rewinds the tape and allows picture search.
- ◄ **ANT key*:**
  This key can be used only for VCRs with a VCR/TV selector.
  Toggles the antenna output between VCR to TV.
- ■ **(STOP) key:**
  Stops tape transport.
- ► **(PLAY) key:**
  Selects playback.
- ►► **(FF) key:**
  Rapidly advances the tape and allows picture search.

Note on DAT operation

The program input procedure differs slightly from that of the remote control unit supplied with Pioneer DAT decks.

Procedure using the DAT deck remote control unit:

1: [0] – [9] key → 2: PROGRAM [P] key → 3: Repeat steps 1 and 2 → 4: [►] key

Procedure using the programmable remote control unit:

1: DAT PGM [1] key → 2: [1] – [0/10] key → 3 MEMORY [11] key → 4: Repeat steps 2 and 3 → 5: [►] key

Direct selection with the remote control supplied with the DAT deck:

1: [0] – [9] key → 2: [►] key

Direct selection with the programmable remote control:

1: DAT PGM [1] key → 2: [1] – [0/10] key → 3: [►] key

As above, DAT PGM [1] DAT function key must be pressed before entering a number.

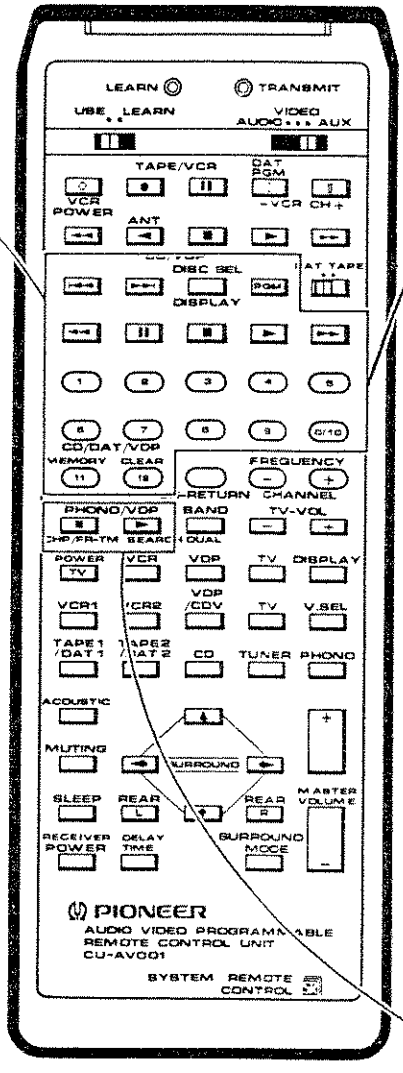
* For switching the antenna input for an optional VCR (for example Pioneer VH-900) the code of the VCR remote control must be memorized.

■ CD PLAYER OPERATION

VIDEO AUDIO • • • AUX — Set the TRANSMIT mode selector switch to AUDIO.

CD Function Keys (Operation of CD player)

- ⏮ **(TRACK SEARCH) key:** Returns to the beginning of the track currently in playing.
- ⏭ **(TRACK SEARCH) key:** Advances to the next track.
- **DISC SEL key:** Selects the DISC No. (1 to 6) for magazine-type CD players.
- **PGM key:** Press to program the CD player.
- ◀◀ **(MANUAL SEARCH) key:** Selects fast backward.
- ❚❚ **(PAUSE) key:** Pauses playback.
- ■ **(STOP) key:** Stops playback.
- ▶ **(PLAY) key:** Selects playback.
- ▶▶ **(MANUAL SEARCH) key:** Selects fast forward.
- **1 – 0/10 (numeric) keys:** For direct selection of a track or programming of tracks.
- **MEMORY key:** Memorizes a program.
- **CLEAR key:** Erases a memorized program.



■ VDP OPERATION

VIDEO AUDIO • • • AUX — Set the TRANSMIT mode selector switch to VIDEO.

VDP function keys (operation of LD player)

- ⏮ **(CHAPTER SKIP) key:** Returns to the beginning of the present chapter.
- ⏭ **(CHAPTER SKIP) key:** Advances to the next chapter.
- **DISPLAY call key:** Clears the chapter and frame time displays on the screen.
- **PGM (PROGRAM) key:** Allows use of chapter program play, frame search and time search.
- ◀◀ **(SCAN) key:** Selects fast backward.
- ❚❚ **(PAUSE) key:** Video and audio are stopped and playback is paused.
- ■ **(EJECT) key:** Playback is stopped when pressed once. Pressing again causes the disc tray to come out.
- ▶ **(PLAY) key:** Selects playback.
- ▶▶ **(SCAN) key:** Selects fast forward.
- **1 – 10 (NUMERIC) keys:** Used for chapter and frame time number search and for chapter program play.
- **MEMORY key:** Used for chapter program play.
- **CLEAR key:** Used for releasing repeat playback, number correction and mode release during search operation, and for releasing chapter program play.
- **CHP/FR-TM (CHAPTER/FRAME•TIME) key:** Used for chapter or frame (time) search operation.
- **SEARCH key:** Used for the search operation and for the memory repeat operation.

Note on CD operation

The program input and direct music selection procedures differ slightly from those of the remote control unit supplied with Pioneer CD players.

Programmed playback operation using the CD player remote control unit:

(1: Disc No. 1 – 6 key) → 2: Track No. 1 – 0 key → 3: MEMORY key → 4: Repeat steps 1 to 3 → 5: PLAY key

Programmed playback operation using the programmable remote control unit:

1: PGM key → (2: DISC SEL key) → 3: 1 – 0/10 key → 4: MEMORY key → 5: Repeat steps 2 to 4 → 6: ▶ key

Direct music selection using the CD player remote control unit:

(1: Disc No. 1 – 6 key) → 2: Track No. 1 – 0 key → 3: PLAY key)

Direct music selection using the programmable remote control unit:

(1: DISC SEL key) → 2: PGM key → 3: 1 – 0/10 key → 4: ▶ key

As above, the PGM CD operation key must be pressed before entering a number.

■ RECEIVER SECTION OPERATION

V.SEL key:
After pressing the V.SEL key, only the video signal can be changed. The selected audio signal remains as set.

INPUT SELECTOR keys:
Press VCR1,VCR2,VDP/CDV,TV,TAPE1 /DAT1,CD,TUNER or PHONO to select the amplifier input.

TAPE 2 / DAT 2 MONITOR keys:
Press TAPE2/DAT2 to switch between source and monitor.

ACOUSTIC select key:
The acoustic setting changes in the following manner each time this key is pressed

→FLAT→LOUDNESS→
←E←D←C←B←A←

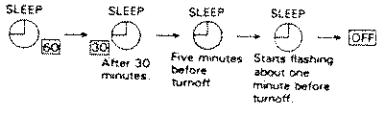
MUTING Key:
Used to temporarily mute the sound.
The volume is restored when pressed again.

SLEEP timer key:
Activates the SLEEP timer. The length changes in the following manner each time the key is pressed:

→60→30→OFF→

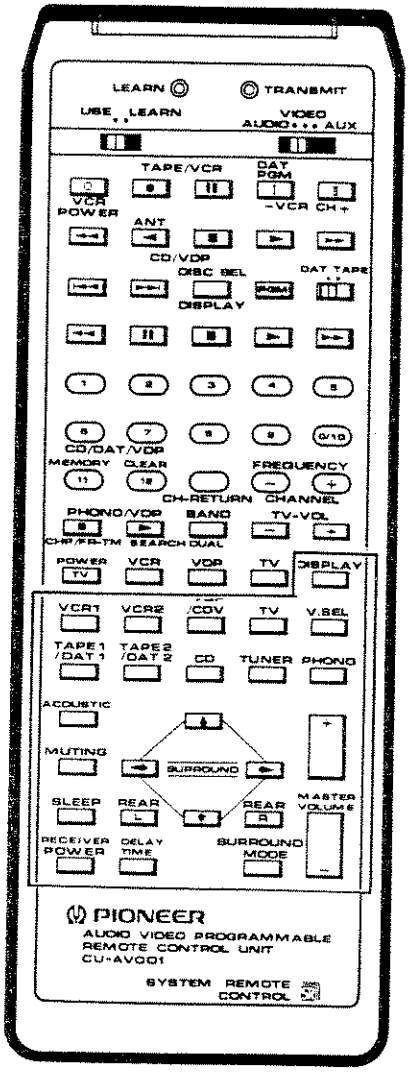
Unit: minutes

Display appearance if 60 minutes is selected.



RECEIVER POWER key:
Switches the receiver power ON/OFF.

REAR L, R keys:
Adjusts the left/right balance of the surround speakers.
L side ... when sound of R channel is too loud.
R side ... when sound of L channel is too loud.



DELAY TIME key:
Switches the delay time for surround each time it is pressed.

→15 ms→20 ms→30 ms→

SURROUND keys (←▲▼→):
The surround area can be set as desired by pressing these four keys.
The left and right keys adjust the left and right level balance. The upper and lower keys adjust the front and surround level balance.

SURROUND MODE key:
The surround mode is switched in the following manner each time the key is pressed:

→STADIUM→SIMULATED SURROUND→
←OFF←DOLBY SURROUND←

MASTER VOLUME key:
Adjusts the overall (front and surround) volume.

DISPLAY key:
Displays/cancels the indication on the TV screen.
(This key does not function with VSX-7300S)

■ TUNER SECTION AND TURNTABLE OPERATION

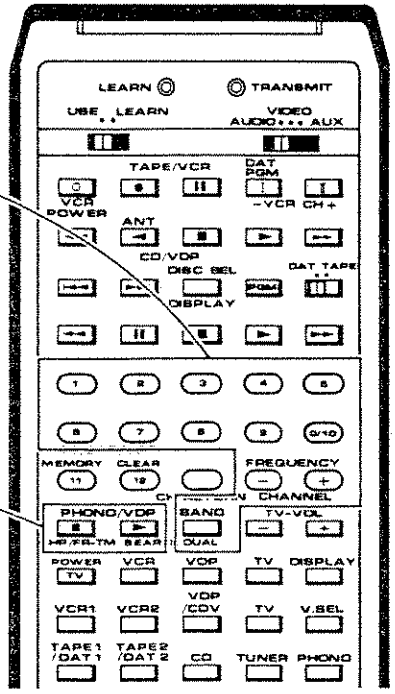
Set the TRANSMIT mode selector switch to AUDIO.

TUNER function keys (operation of FM/AM Tuner)

1 to 0/10 (STATION CALL) keys:
For recall of tuner presets.
FREQUENCY + (UP):
Shifts the frequency up.
FREQUENCY - (DOWN):
Shifts the frequency down.
BAND key:
Switches the FM and AM bands by turns.

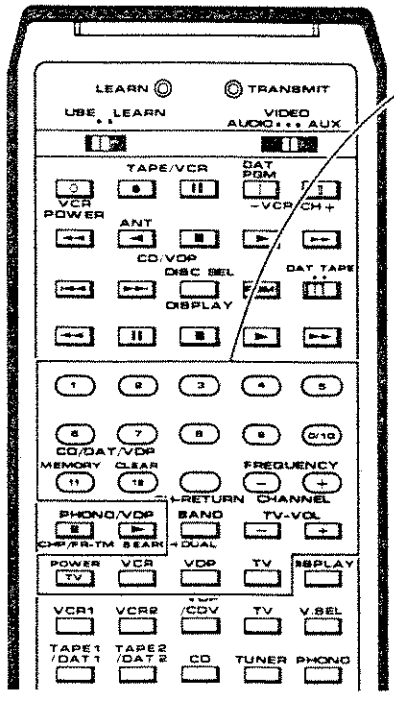
PHONO function keys (operation of turntable)

- ► **(PLAY) key:**
  Selects play.
- ■ **(STOP) key:**
  Stops play.



■ TV OPERATION

Set the TRANSMIT mode selector switch to VIDEO.



TV function keys (operation of component display or projection monitor receiver)

1 to 12 (CHANNEL CALL DIGIT) keys:
Used to call up channels.
CR-RETURN key:
Returns to the previously received channel.
CHANNEL + (UP) key:
Changes the channel in the direction of larger CHANNEL CALL DIGIT numbers.
CHANNEL - (DOWN) key:
Changes the channel in the direction of smaller CHANNEL CALL DIGIT numbers.
DUAL (MTS) key:
Switches between MAIN, SAP, MAIN/SAP and (MONO). See the TV operating instructions for details.

- *** TV-VOL +, - keys:**
  Raises and lowers the volume.
- *** TV-POWER key:**
  Switches the power of the TV ON/OFF.
- *** VCR, VDP, TV keys:**
  Switches to the corresponding input.

[Reference]
The keys marked with • have the same function in both the AUDIO and VIDEO positions.

LEARNING FUNCTIONS

Introduction

This system remote control can "learn" the commands of other remote control units, regardless of manufacturerer, as long as the other unit is of the infrared type.
In some cases you may still need the original remote control unit for special situations. But as a rule, you will be able to use this Pioneer remote for most system control needs, including video as well as audio equipment.

NOTE:
When using the "LEARN" mode it is a good idea to take the two remote control units to another room. This avoids problems such as sudden high volume output or accidental tape erasure that may occur if particular infrared command signals reach your components. Alternatively, you may wish to unplug your component system. Simply turning off the power may not be sufficient since power on/off switching may also be remote controllable.

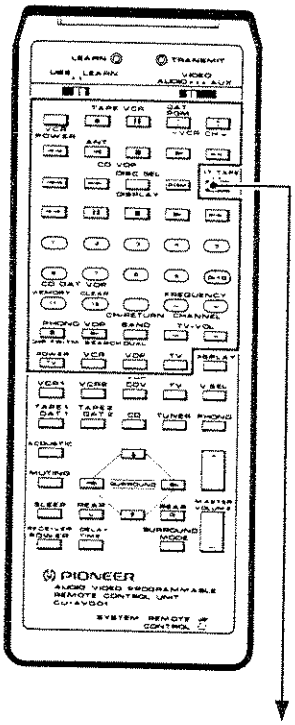
Which keys can be programmed with new commands?

There are two mode selector switches near the front end of the remote. The LEARN mode selector lets you select the USE or LEARN function. The LEARN mode allows the Pioneer remote to "LEARN" the commands of other remote control units. The USE mode allows you to use this remote control unit for operation of your system.

The keys on the remote control unit change their functions according to how the TRANSMIT mode selector is set. You can switch the TRANSMIT mode between the AUDIO, VIDEO, and AUX modes. However, the keys in the SURROUND AMPLIFIER section always have the same functions.
You can assign new commands to the keys in each of the modes. In the AUX mode, all keys are available to be programmed with new commands. In the VIDEO and AUDIO modes, all keys except the SURROUND AMPLIFIER keys can be assigned new commands.
When you first start using the remote control unit, it contains initial commands appropriate for Pioneer components (when set to the AUDIO and VIDEO modes). If your audio and video equipment consists of Pioneer components exclusively you can use the remote control unit as is. It is also possible to restore the original Pioneer commands after assigning other commands. (Refer to "Returning to the Initial Settings" for this procedure.)

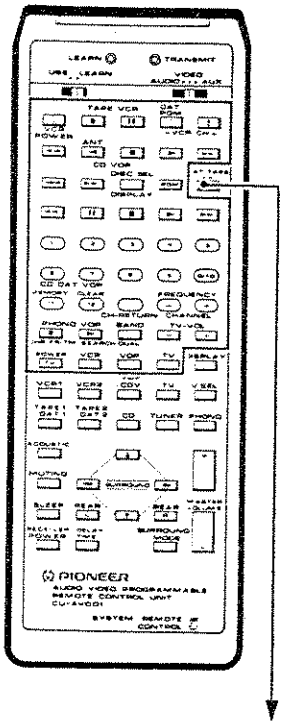
- In each mode one function per key may be programmed, for a total of up to 154 functions.
- When presetting keys, make sure that the remote control units of both this and the other component are loaded with fresh batteries.
- For some special types of infrared remote control units programming may be impossible.

AUDIO mode



In the AUDIO mode the TAPE function keys can be preset with new functions for the DAT position or the TAPE position.
The initial ⚙ settings will remain in the other position (43 keys can be programmed.).

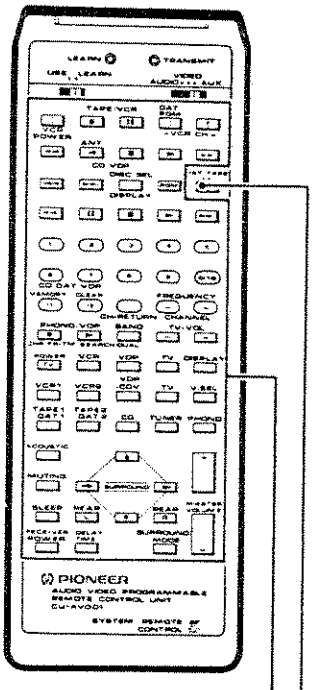
VIDEO mode



In the VIDEO mode the DAT/TAPE switch is inoperative (43 keys can be programmed.).

When teaching functions whose names differ from those of the keys, write in the names or codes of the functions on the included templates and place on the panel.

AUX mode

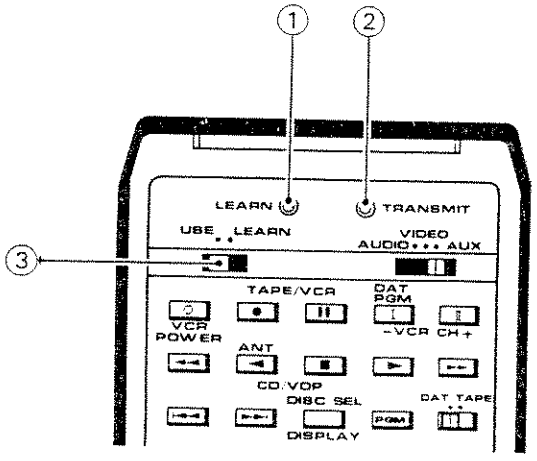


All buttons can be preset (68 keys can be programmed.).

In the AUX mode the DAT/TAPE switch is inoperative.

[Operation Example]
Using the remote control unit of your VCR to program the playback command.

- It is recommended that the name of the key and its function correspond. This is convenient when operating equipment.



① LEARN indicator

This indicator shows the remote control unit operating condition.

LIT:
Learning is possible.

OFF:
Regular remote control functions are performed.

FLASHING:
Means the key is not available for programming a new command in the current mode.

② TRANSMIT indicator

This indicator flashes when remote control signals are sent.

③ LEARN selector switch

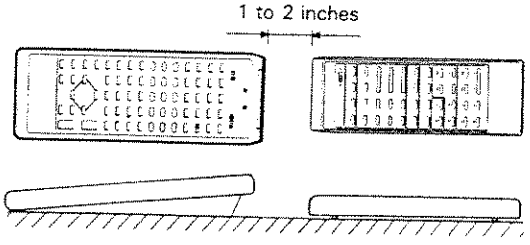
Set as follows:

LEARN:
This position is used for storing the codes of your remote control unit.

USE:
Set to this position after codes have been stored in the LEARN position. Set to this position for normal operation.

[Operation example]

1. Set the LEARN switch of the programmable remote control unit to the LEARN position and set the TRANSMIT mode selector switch to the VIDEO position.
   - Programming is possible with the TRANSMIT mode selector switch in any position, but VIDEO is used as an example.
2. Place the transmission sections of the programmable remote control unit and the remote control of the VCR facing each other.



   - Place the two units on a table, separated by 2 to 5 cm (1 to 2 inches).
     Memorization will not be possible if they are too close.
3. Hold down the VCR PLAY key of the Programmable remote control unit until the LEARN indicator light up, then release the key.
4. Hold down the PLAY key of the VCR remote control unit.
5. Release the key of the VCR remote control unit after making sure that the LEARN indicator has gone out on the Pioneer remote control unit.

NOTE:
If the LEARN indicator flashes, it indicates that you are trying to preset a key not available for the learning function, or otherwise the program capacity has been exceeded, the function programmed last will not be memorized correctly. All previously programmed functions, however, will be retained in memory and may be used as they are if the last function is not essential. For re-programming refer to page 39 "Returning to the Initial Settings".

6. Set the LEARN selector switch of the programmable remote control unit to the USE position.
   - The previous code (Pioneer uniform remote control code or code for other equipment) is erased and replaced by the new code.
7. Check that the program works.
   - Try actual operation and make sure the unit works properly.
   - If the VCR does not operate when pressing the key, change angle, position and distance between the remote control units and repeat the programming procedure.
   - When programming, make sure that the function indications (for example, ► , ►►, ■) on the other remote control unit and the programmable remote control unit are the same. This will facilitate operation.

Questions and Answers about the Learning Function

Q: The remote control unit of my VCR has two REC (recording) keys. They both have to be pressed at the same time to start recording. What is the learning procedure in this case?

A: Hold one of the keys on the programmable remote control depressed (for example the VCR ● key) until the LEARN indicator lights up, and then press the two keys on the VCR remote control simultaneously.

Q: The remote control unit of my VCR has a REC (recording) key and a PLAY (playback) key and they both have to be pressed at the same time to start recording. What is the learning procedure in this case?

A: Hold one of the keys on the programmable remote control depressed (for example the VCR ● key) until the LEARN indicator lights up, and then press the REC and PLAY keys on the VCR remote control simultaneously.

- As described above, operations which require two keys to be pressed at the same time are programmed by pressing the two keys simultaneously.

Operating other equipment using the programmable remote control unit

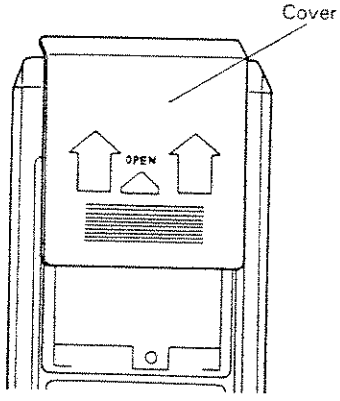
1. Set the LEARN switch of the programmable remote control unit to the USE position.
2. Set the TRANSMIT mode selector switch to the desired position (AUDIO/VIDEO/AUX).
   - Set to the VIDEO position for programming as described in the example.
3. Press the key of the desired function.
   - The TRANSMIT indicator lights up while the remote control unit is sending codes.

NOTE:

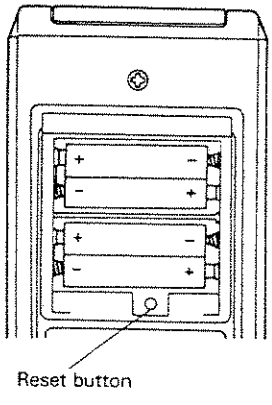
- *When operating programmed keys, always set the LEARN switch to the USE position. Operation is not possible in the LEARN position.*
- *For functions which require two keys to be pressed at the same time (recording etc.) or functions for which several codes are sent simultaneously (auto functions, timer programming, etc.) the programming procedure is different and improper operation may occur.*

Returning to the Initial Settings

1. Set the LEARN selector switch to the LEARN position.
2. Remove the battery cover.



3. Press any of the keys available for programming. The LEARN indicator will illuminate.
4. Use a ball-point pen or similar object to press the RESET key while the LEARN indicator is flashing.



- The programmed functions for the AUDIO, VIDEO and AUX positions are cleared, and the remote control unit is reset to the Pioneer uniform remote control codes.
- Press the button gently; do not use excessive force.

HINTS FOR BETTER RECEPTION

EXTERNAL FM ANTENNA

The main advantage of FM over AM is the quality of the broadcast signal. In order to benefit fully from the high signal quality of FM broadcasts, it is recommended that a special-purpose FM antenna be installed. In weak signal areas, a multi-element (3-element, 5-element, 7-element) antenna should be used.

GROUNDING

Grounding is recommended if reception of FM programs is impaired by noise. To ground, connect a thick polyvinyl insulated wire to the GND terminal and attach the other end to a metal water pipe or grounding bar or wind it around a copper plate and bury it.

NOTE:

Never connect a wire to a gas pipe for grounding since sparks may ignite the gas.

EXTERNAL AM ANTENNA

If it is not possible to obtain adequate AM reception even by changing the orientation of the AM loop antenna, a separate indoor antenna, or an outdoor antenna should be installed.

INDOOR AM ANTENNA

Use a vinyl insulated wire (5 — 6m) and connect one end to the AM antenna terminal and affix the other end to the wall or ceiling, as high as possible.

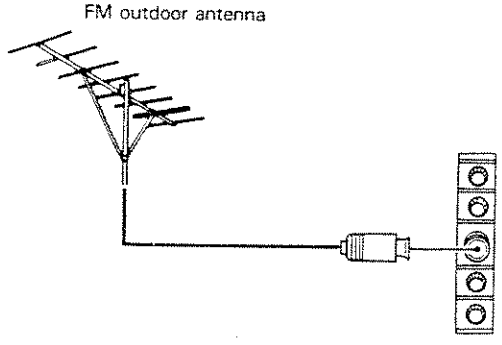
OUTDOOR AM ANTENNA

If reception quality is not improved sufficiently even when an indoor antenna is used, a vinyl insulated wire should be installed outside and fixed in place.

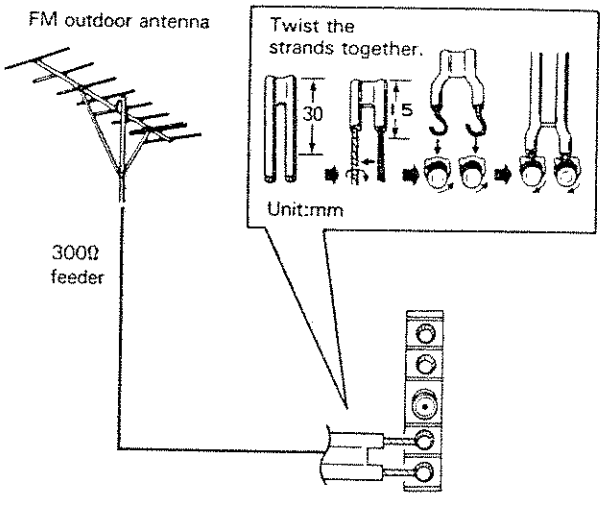
NOTE:

Do not detach the AM loop antenna when using an indoor or an outdoor AM antenna

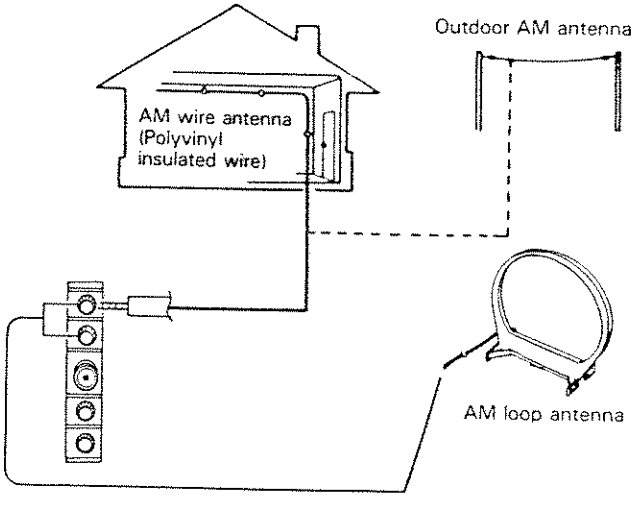
Connecting the coaxial cable



Connecting the 300Ω feeder



AM antenna connection



TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunction. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
Power does not come on even when POWER switch is pressed.	• Power cord is disconnected. • Instances are rare, but the problem may be due to the operation of the protector circuit.	• Connect cord securely. • Unplug the power cord of the unit from the AC wall outlet, then plug it in again.
Control was not possible regardless of what operation switch was pressed.	• Static electricity affected the unit when the air was dry, such as in winter.	• Unplug the power cord of the unit from the AC wall outlet, then plug it in again. • If static electricity is pronounced, it is recommended that you operate the unit using the remote controller.
No sound is produced, even when the INPUT SELECTOR switch is selected.	• Connections are incorrect.	• Consult page 6 — 13 and perform connections correctly.
	• The MUTE switch is pressed.	• Press the MUTING switch to cancel the MUTING effect.
	• SPEAKERS switches are turned OFF.	• Press the SPEAKERS switch to turn ON.
	• VOLUME switch is turned down.	• Raise volume.
	• Speaker connecting wires are disconnected from speaker terminals.	• Connect wires to terminals securely.
	• One or both of the input cords are disconnected.	• Connect input cords securely.
	• TAPE2/DAT2 MONITOR switch is in the ON position.	• Press the switch again to the OFF position.
	• Connector bars are disconnected.	• Connect bars securely.
	• Stations memorized in the STATION CALL switches are erased.	• Consult your Pioneer authorized service station.
Rear sound is not produced.	• SURROUND MODE switch is OFF position.	• Press the SURROUND MODE switch to correct position.
REAR L or R sound is not produced.	• REAR BALANCE is incorrect.	• Press the REAR BALANCE R or L on the remote control unit to correct the balance.
No picture is produced, even when the INPUT SELECTOR switch is selected.	• Connections are incorrect. • The VIDEO SIGNAL SELECTOR is not set properly. • The VCR and the selected INPUT SELECTOR switch are not correct.	• Consult page 7 and 13 and perform connections correctly. • Set correctly. • Press the correct switch.
High noise level	• Station has not been tuned in to correct frequency.	• Tune the station in correctly.
	• Antenna has not been connected or has become disconnected.	• Connect the antenna securely.
	FM reception • Accessory T-type antenna remains bundled up or it is not pointing in right direction.	• Stretch both end of antenna taut and locate direction yielding optimum reception.
	• Weak broadcasting station signals.	• Replace accessory T-type antenna with outdoor FM antenna.
	AM reception • AM loop antenna is not pointing in right direction.	• Change the AM loop antenna's direction and find a position where reception is improved.
	• Weak broadcasting station signals.	• Erect outdoor AM antenna or connect ground wire.
	• Noise being picked up from this unit and other equipment (especially electrical appliances using motor or fluorescent lights).	• Stop using appliances generating noise or remove them from vicinity of stereo equipment. • Separate the loop antenna from the unit by some distance.
No auto stop	• Input signals are not strong enough.	• (FM) If the T-type antenna is being used, change to an outdoor antenna.
TV source can't be seen when the VCR's TV tuner is used.	• TV antenna is not connected to VCR, or connections are faulty.	• Consult the VCR's operating instructions, and connect antenna correctly.
	• You are attempting to watch a TV source using a VCR with copy system connections. In general, when copy system connections are made, the VCR's TV tuner function ceases to operate. For details, consult the operating instructions for your VCR.	• Disconnect the copy system connection (TV tuner function will operate).
Video tape copies can't be made with the VCR.	• Video tape copy connections haven't been made.	• Look again closely at the section VIDEO SYSTEM CONNECTIONS on page 7 and 13, and connect correctly.

SPECIFICATIONS

Amplifier section

(POWER IN) FRONT

Continuous average power output of 125 watts* per channel , min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.005% total harmonic distortion.**

**Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*
***Measured by Audio Spectrum Analyzer.*

Continuous Power Output
1 kHz, 0.7%, 8 Ω (Rear) ..... 30W + 30W
Dynamic Power (2 Ω/4 Ω/8 Ω) ..... 280 W/260 W/185 W
Damping Factor
1 kHz, 8 Ω 100
Input (Sensitivity/Impedance)
PHONO MM ..... 2.5 mV/47 kΩ
CD, TAPE 1/DAT 1, TAPE 2/DAT 2, TV, VDP/CDV, VCR 1, VCR 2 ..... 150 mV/47 kΩ
FRONT POWER AMP IN ..... 1 V/47 kΩ
Phono Overload Level (T.H.D. 0.08%, 1000 Hz)
PHONO MM ..... 150 mV
Frequency Response
PHONO MM ..... 20 Hz to 20,000 Hz ±0.3 dB
CD, TAPE 1/DAT 1, TAPE 2/DAT 2, TV, VDP/CDV, VCR 1, VCR 2 ..... 5 Hz to 100,000 Hz $^{+0}_{-3}$dB
Output (Level/Impedance)
TAPE 1/DAT 1 REC, TAPE 2/DAT 2 REC ..... 150 mV/2.2 kΩ
VCR 1 OUT, VCR 2 OUT ..... 150 mV/2.2 kΩ
FRONT PRE AMP OUT 1 V/220Ω
Tone Control
BASS 100 Hz ..... ±8 dB
TREBLE 10 kHz ..... ±8 dB
VCR Noise Filter ..... 100 Hz, 5 kHz: −3 dB
Loudness Contour ..... 6 dB (100 Hz)
3 dB (10 kHz)
Signal-to-Noise Ratio (IHF, short circuited, A network)
PHONO MM ..... 82 dB
CD, TAPE 1/DAT 1, TAPE 2/DAT 2, TV, VDP/CDV, VCR 1, VCR 2 ..... 98 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
PHONO MM ..... 77 dB
CD, TAPE 1/DAT 1, TAPE 2/DAT 2, TV, VDP/CDV
VCR 1, VCR 2 ..... 80 dB
SURROUND Section
CENTER OUT (L = R = 106 mV input) (Level/Impedance) ..... 2 V/4.7 kΩ

VIDEO Section

Input (Level/Impedance)
VCR 1, VCR 2, VDP/CDV, TV, ADAPTOR ..... 1Vp-p/75 Ω
Output (Level/Impedance)
VCR 1, VCR 2, ADAPTOR, MONITOR ..... 1Vp-p/75 Ω
Frequency Response
VCR 1, VCR 2, VDP/CDV, TV, ADAPTOR—MONITOR ..... 5 Hz—10 M Hz $^{+0}_{-3}$dB
Signal-to-Noise-Ratio ..... 55 dB
Cross Talk ..... 55 dB (3.58 MHz)
Enhancer ..... 2 MHz ±3 dB

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MH
Usable Sensitivity ..... Mono; 10.8 dBf, IHF (0.95 μV/75 Ω
50 dB Quieting Sensitivity ..... Mono; 15.3 dBf, (1.6 μV/75 Ω
Stereo; 37.1 dBf, (19.5 μV/75 Ω
Signal-to-Noise Ratio ..... Mono; 80 dB (at 65 dBf
Stereo; 76 dB (at 85 dBf
Distortion ..... Mono; 0.08% (100 Hz
0.08% (1 kHz
0.2% (6 kHz
Stereo; 0.2% (100 Hz)
0.15% (1 kHz)
0.3% (6 kHz)
Capture Ratio ..... 1.0 dB
Alternate Channel Selectivity ..... 65 dB (400 kHz)
Stereo Separation ..... 50 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz $^{+0.5}_{-2.0}$dB
Image Interference Ratio ..... 50 dB
IF Interference Ratio ..... 80 dB
AM Suppression Ratio ..... 55 dB
Spurious Interference Ratio ..... 70 dB
Antenna Input ..... 300 Ω balanced
75 Ω unbalanced

AM Tuner Section

Frequency Range
When 10 kHz step ..... 530 kHz to 1,700 kHz
When 9 kHz step ..... 531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna) ..... 300 μV/m
Selectivity ..... 30 dB
Signal-to-Noise Ratio ..... 50 dB
Image Interference Ratio ..... 40 dB
IF Interference Ratio ..... 65 dB
Antenna ..... Loop antenna

Miscellaneous

Power requirements
U.S. and Canadian models ..... AC 120V,60Hz
Other destination model ..... AC 110V/120-127V 220V/240V (Switchable),50/60 Hz
Power consumption
U.S. and Canadian models 550W,660VA
Othe destination model 800W
In standby condition ..... 3 W
AC Outlets
SWITCHED x 2
U.S. and Canadian models ..... TOTAL 300W MAX
Other destination model ..... TOTAL 100W MAX
UNSWITCHED x 1
U.S. and Canadian models ..... 200W MAX
Other destination model ..... 100W MAX
Dimensions ..... 420 (W) x 156 (H) x 421 (D) mm
16-7/16 (W) x 6-1/8 (H) x 16-9/16 (D) in
Weight (without package) ..... 12 kg (26 lb 7 oz)

Furnished Parts

FM T-type antenna 1
AM Loop antenna 1
Dry cell battery (LR03/AM-4) 4
Remote control unit 1
Operating Instructions 1

NOTE:
Specifications and the design subject to possible modifications without notice due to improvements.